TEXTILE TECHNOLOGY DIGEST

VOLUME 14 JANUARY, 1957 NUMBER 1

ABSTRACTS

FIBERS A

THE CHEMICAL ATTACK OF TEXTILE FIBERS. PART I (A). CELLULOSE FIBERS. F. O. Howitt. J. Textile Inst. 47: P909-P933 (Nov. 1956). (1)

Cellulose fibers (cotton, cellulose acetate, and viscose rayon) are considered in relation to their response to the action of acids, alkalis, oxidizing agents, reducing agents, salt solutions, organic solvents, and other chemical reagents.

NATURAL FIBERS A 1

THE PREDICTION OF THE MICRONAIRE VALUE FOR A BALE OR A GROUP OF BALES: A STATISTICAL STUDY. F. C. Brenner and P. M. Scocca (Johnson & Johnson). Textile Research J. 26: 899-902 (Nov. 1956). (2)

To predict the true mean micronaire value of 1 bale with 95% confidence, 8 random samples are required. When 20 or more bales are blended, 1 micronaire determination on a composite of 2 samples from the outer sides of the bale gives a precise prediction; for less than 20 bales the micronaire value of 2 samples from each bale should be determined. 5 references.

COTTON QUALITY AND FIBER PROPERTIES. PART 6. COMPARISON OF A MATCHED PAIR OF RAIN-GROWN AND IRRIGATED COTTONS. H. Wakeham (Textile Res. Inst.). Textile Research J. 26: 925-936 (Dec. 1956). (3)

Fiber tests indicated the cottons were alike in all properties except the energy required to uncrimp the fibers, which was consistently higher for the irrigated cotton. From a practical point of view, no fundamental, deep-seated difference in processing could be observed. With slight processing organization adjustments, the differences in mechanical processing characteristics would probably become insignificant.

WHAT CAN BE EXPECTED FROM 1956 COTTON. F. L. Gerdes. Textile World 107: 82-83, 168-170 (Jan. 1957). (4)

Summary of U. S. Dept. of Agriculture fiber and spinning tests. Graphs.

THE DIRTIEST PACKAGE IN THE WORLD. Textile Ind. 121: 80-81 (Jan. 1957). (5)

Brief summary of principal objections to a better cotton bale. Photographs.

ESPARTO AS A JUTE, SISAL AND COIR SUBSTITUTE. A. Reid. Textile Quart. 6, No. 4: 215-216 (1956). (6)

The difficulties of processing esparto (straw) are briefly reviewed.

HEMP FIBERS. B. Biswas. Indian Textile J. 66: 730-731, 741 (Sept. 1956). (7)

The ambiguous use of the word hemp for various fibers is discussed, and proposals for clarification of nomenclature are given.

THEORY OF FIBER EXTRACTION. CHAPTER 5. PRIMITIVE METHODS OF FIBER EXTRACTION. J. G. Thieme. Textile Quart. 6, No. 4: 194-207 (1956). (8)

The principles of fiber decortication and retting by primitive methods are reviewed. 36 references.

A HELICAL SPRING MODEL FOR THE UNCRIMPING OF WOOL FIBERS. H. W. Holdaway (Wool Textile Res. Labs., Australia). J. Textile Inst. 47: T586-T602 (Nov. 1956). (9)

A helical spring is proposed as a model to represent the load vs. extension behavior of a wool fiber in uncrimping. The theoretical relationship can be represented, with reasonable accuracy, by a much simpler empirical equation previously determined experimentally, and permits a physical interpretation to be given to the empirical parameters. 8 references.

THE SUPERCONTRACTION OF WOOL TREATED WITH NITROUS ACID. C. S. Whewell and T. M. Menon (Leeds Univ.). (Letter to the editor). J. Textile Inst. 47: T652-T653 (Dec. 1956). (10)

THE BILATERAL CORTICAL STRUCTURE OF PAKISTANI CARPET WOOL. N. Ahmad and W. R. Lang (Gordon Inst. of Tech.). (Letter to the editor). Textile Research J. 26: 954-956 (Dec. 1956). (11)

MAN-MADE FIBERS A 2

EXPERIMENTAL STUDY OF THE VISCOELASTIC PROPERTIES OF TEXTILE FIBERS. PART 2. THE INFLUENCE OF PHYSICAL TREATMENTS UPON THE DYNAMIC PROPERTIES OF SOME FIBER-FORMING POLYMERS. K. Fujino, H. Kawai, T. Horino and K. Miyamoto (Kyoto Univ.). Textile Research J. 26: 852-871 (Nov. 1956). (12)

TEXTILE TECHNOLOGY DIGEST

VOLUME 14 JANUARY, 1957 NUMBER 1

ABSTRACTS

FIBERS A

THE CHEMICAL ATTACK OF TEXTILE FIBERS. PART I (A). CELLULOSE FIBERS. F. O. Howitt. J. Textile Inst. 47: P909-P933 (Nov. 1956). (1)

Cellulose fibers (cotton, cellulose acetate, and viscose rayon) are considered in relation to their response to the action of acids, alkalis, oxidizing agents, reducing agents, salt solutions, organic solvents, and other chemical reagents.

NATURAL FIBERS A 1

THE PREDICTION OF THE MICRONAIRE VALUE FOR A BALE OR A GROUP OF BALES: A STATISTICAL STUDY. F. C. Brenner and P. M. Scocca (Johnson & Johnson). Textile Research J. 26: 899-902 (Nov. 1956). (2)

To predict the true mean micronaire value of 1 bale with 95% confidence, 8 random samples are required. When 20 or more bales are blended, 1 micronaire determination on a composite of 2 samples from the outer sides of the bale gives a precise prediction; for less than 20 bales the micronaire value of 2 samples from each bale should be determined. 5 references.

COTTON QUALITY AND FIBER PROPERTIES. PART 6. COMPARISON OF A MATCHED PAIR OF RAIN-GROWN AND IRRIGATED COTTONS. H. Wakeham (Textile Res. Inst.). Textile Research J. 26: 925-936 (Dec. 1956). (3)

Fiber tests indicated the cottons were alike in all properties except the energy required to uncrimp the fibers, which was consistently higher for the irrigated cotton. From a practical point of view, no fundamental, deep-seated difference in processing could be observed. With slight processing organization adjustments, the differences in mechanical processing characteristics would probably become insignificant.

WHAT CAN BE EXPECTED FROM 1956 COTTON. F. L. Gerdes. Textile World 107: 82-83, 168-170 (Jan. 1957). (4)

Summary of U. S. Dept. of Agriculture fiber and spinning tests. Graphs.

THE DIRTIEST PACKAGE IN THE WORLD. Textile Ind. 121: 80-81 (Jan. 1957). (5)

Brief summary of principal objections to a better cotton bale. Photographs.

ESPARTO AS A JUTE, SISAL AND COIR SUBSTITUTE. A. Reid. Textile Quart. 6, No. 4: 215-216 (1956). (6)

The difficulties of processing esparto (straw) are briefly reviewed.

HEMP FIBERS. B. Biswas. Indian Textile J. 66: 730-731, 741 (Sept. 1956). (7)

The ambiguous use of the word hemp for various fibers is discussed, and proposals for clarification of nomenclature are given.

THEORY OF FIBER EXTRACTION. CHAPTER 5. PRIMITIVE METHODS OF FIBER EXTRACTION. J. G. Thieme. Textile Quart. 6, No. 4: 194-207 (1956). (8)

The principles of fiber decortication and retting by primitive methods are reviewed. 36 references.

A HELICAL SPRING MODEL FOR THE UNCRIMPING OF WOOL FIBERS. H. W. Holdaway (Wool Textile Res. Labs., Australia). J. Textile Inst. 47: T586-T602 (Nov. 1956). (9)

A helical spring is proposed as a model to represent the load vs. extension behavior of a wool fiber in uncrimping. The theoretical relationship can be represented, with reasonable accuracy, by a much simpler empirical equation previously determined experimentally, and permits a physical interpretation to be given to the empirical parameters. 8 references.

THE SUPERCONTRACTION OF WOOL TREATED WITH NITROUS ACID. C. S. Whewell and T. M. Menon (Leeds Univ.). (Letter to the editor). J. Textile Inst. 47: T652-T653 (Dec. 1956). (10)

THE BILATERAL CORTICAL STRUCTURE OF PAKISTANI CARPET WOOL. N. Ahmad and W. R. Lang (Gordon Inst. of Tech.). (Letter to the editor). Textile Research J. 26: 954-956 (Dec. 1956). (11)

MAN-MADE FIBERS A 2

EXPERIMENTAL STUDY OF THE VISCOELASTIC PROPERTIES OF TEXTILE FIBERS. PART 2. THE INFLUENCE OF PHYSICAL TREATMENTS UPON THE DYNAMIC PROPERTIES OF SOME FIBER-FORMING POLYMERS. K. Fujino, H. Kawai, T. Horino and K. Miyamoto (Kyoto Univ.). Textile Research J. 26: 852-871 (Nov. 1956). (12)

The effects of crystallization and molecular orientation upon the relaxation spectra of several typical fiber-forming polymers over rather wide range, using physical treatments, such as heat and cold-drawing, are examined. 62 references.

THE WATER ABSORPTION CHARACTERISTICS OF MONOFILAMENT CELLULOSE. P. Denton. J. Textile Inst. 47: T570-T585 (Nov. 1956). Shirley Inst. Mem. 29: 119-134 (Sept. 1956). (13)

The rate of water absorption and consequent rate of change of section area of regenerated cellulose filament on exposure to an air stream of fixed humidity were determined. These regain and area values increased approximately linearly, in two successive stages. 20 references.

VEREL ACRYLIC FIBER. Modern Textiles Mag. 37: 68-72, 79 (Nov. 1956). (14)

Physical and chemical aspects, by H. W. Coover, Jr., p. 68-71; Dyeing and finishing properties, by W. R. Ivey, Jr., p. 71-72; Applications and possibilities, by R. T. Crawford, p. 72, 79.

ARNEL: GENERAL DATA AND PHYSICAL-CHEMICAL PROPERTIES. Celanese Corp., Charlotte, N. C., 1956. 15 p. Technical bulletin, TD-12A. Free. (15)

THE SHEAR AND YOUNG'S MODULI OF NYLON 6.6 MONOFILAMENTS OF VARIOUS ORIENTATIONS AND THE VARIATION OF SHEAR MODULUS WITH RELATIVE HUMIDITY. N. Adams (Brit. Rayon Res. Assoc.). J. Textile Inst. 47: T530-T540 (Oct. 1956). (16)

At 66% r.h. the shear modulus increased slowly and the Young's modulus rapidly with the amount of drawing. The shear modulus, measured at 6 humidities from 0% to 93% r.h., decreased steadily with increase of humidity for all the filaments. Below about 40% r.h. the shear modulus decreased with increased amount of drawing, but at higher humidities it increased. 4 references.

POLYETHYLENE FIBERS FACE BRIGHTER FUTURE. Modern Plastics 34: 132-135, 249-251 (Dec. 1956). (17)

Properties, processing, and present and potential applications of linear and branched polyethylene monofilaments. Photographs. 5 references.

PROGRESS IN MAN-MADE PROTEIN FIBERS. J. S. Gillespie, Jr. (Virginia Carolina Chem. Corp.). Textile Research J. 26: 881-888 (Nov. 1956). (18)

Sources, manufacture, properties, and applications are covered. 15 references.

POLYVINYL ALCOHOL FIBERS. B. C. M. Dorset. Textile Mfr. 82: 636-643 (Dec. 1956). (19)

Methods of manufacture and properties of Vinylon are reviewed and future possibilities of modification are suggested. 11 references.

YARN PRODUCTION B

PROCESSING FIBER BLENDS. F. Charnley. Man-Made Textiles 33: 56-57 (Oct. 1956); 47-48 (Nov. 1956); 46-48 (Dec. 1956). (20)

HANDLING DACRON/COTTON BLENDS. A. Deschee-maeker (E. I. du Pont de Nemours & Co.). Textile World 107: 127, 186-188 (Jan. 1957). Textile Ind. 121: 116-118 (Jan. 1957). (21)

Blending, drawing, sizing, and finishing procedures for the production of 65% Dacron/35% cotton blends.

TERLENKA ON THE COTTON SYSTEM. J. Prins. Enka Breda Rayon Rev. (English ed.) 10: 169-173 (Nov. 1956). (22)

Processing of 3 different blends: 50% Terlenka/50% rayon staple, 70% Terlenka/30% rayon staple, and 65% Terlenka/35% cotton, on the cotton system. Photographs. Diagram.

TURBO STAPLER AND THE PRODUCTION OF HIGH BULK YARNS. Turbo Mach. Co. Textile Quart. 6, No. 4: 227-230 (1956). (23)

Features and operation of the Turbo stapler, a continuous filament tow to sliver stapling machine. Diagrams.

OPENING, PICKING, FIBER PREPARATION B 1

WORSTED BLENDING. W. J. Wood (Knitters, Ltd). Textile Ind. 121: 96-98 (Jan. 1957). (24)

A practical method of assessing blending efficiency is described. Tables. Diagrams.

COTTON WASTE INDUSTRY. PART 5. PREPARING AND BLENDING. Platts Bull. 9, No. 2: 42-45 (1956). (25)

AUTOMATION OF TOW SCUTCHING. J. Robeck. Textile Quart. 6, No. 4: 224-226 (1956). (26)

Features of the Kovo decorticator for flax and hemp tow. Photographs.

NEW BELGIAN FLAX SCUTCHING MACHINES. Textile Quart. 6, No. 4: 231-232 (1956). (27)

Belgian flax machines manufactured by Vanhauwaert and Co., R. & J. Depoortere, C. Van Dommele, and M. Soenens are briefly described.

CARDING AND COMBING B 2

DOFFER COMBS ELIMINATED. Abington Textile Machy. Works. Textile Ind. 121: 85-86 (Jan. 1957). (28)

Rolaslivup, a sliver take-off device, which completely replaces the reciprocating doffer comb, consists of 2

driven metal rolls of different sizes, running together. The device operates in conjunction with a semiautomatic vacuum stripping system, stopping when the stripper operates, and starting after stripping. Photographs.

CARE AND MAINTENANCE OF COTTON CARDS. J. K. Clegg. Textile Recorder 74: 60-62 (Nov. 1956); 72-73, 83 (Dec. 1956). (29)

A discussion of the points essential to the production of a clean and well prepared card sliver with details of settings and a suggested maintenance routine.

THE USE OF A FANCY ROLLER FOR CARDING MAN-MADE FIBERS ON THE COTTON SYSTEM. J. Blokland Visser. Enka Breda Rayon Rev. (English ed.) 10: 184-186 (Nov. 1956). (30)

MANUAL FOR TESTING PROCEDURES. PART 4. PACKAGE SIZE. G. Guggenheim (Buck Creek Cotton Mills). Textile Bull. 82: 83-84 (Nov. 1956). (31)

Procedures for increasing package size (can content) during carding and controlling short term variation in sliver.

MODERN WOOL COMBING PRACTICE. PART 7. FACTORS WHICH INFLUENCE TEAR. R. Walker. Textile Mfr. 82: 570-571, 576 (Nov. 1956). (32)

The main factors influencing tear (ratio of top to noil) are discussed, and working principles and machine particulars of the Lister comb are given.

DRAWING AND ROVING B 3

QUALITY CONTROL OF COTTON YARN. R. L. N. Iyengar. Bull. Quality Control Assoc. Bangalore 3: 11-13 (May 1956). (33)

The effects of variation in fiber fineness and length upon short-term variation in yarn, using Indian cottons of various varieties and 3-process drawing and roving. 3 references.

ASPECTS OF WORSTED YARN MANUFACTURE. PART 1. N. Roper. Textile Mfr. 82: 619-623, 626 (Dec. 1956). (34)

Recent investigations on the Bradford system of open drawing show that for most types of yarn up to 1/50s counts a 5-operation drawing set is completely successful. Yarns from short process rovings are equal if not better than those processed with 7 or 8 stages of drafting and doubling. Advantages and disadvantages of abbreviated drawing and of the American and Raper autoleveller systems are discussed.

WORSTED SPINNING: THE REGELSTRECKE. H. Kittel. Melliand Textilber. (English ed.) 37, No. 2: 110-116 (1956). (35)

Operation, construction, and test results obtained on the Bremer Regelstrecke worsted drawing frame. Tables. Diagram. Photographs.

REDUCING ROVING END BREAKAGE. J. E. Allen. Textile World 106: 93 (Dec. 1956). (36)

Pointers for finding and correcting defects causing end breakages at roving frames.

SPEED FRAME STOP MOTION. Tweedales & Smalley Ltd. Globe Rev. 2, No. 3: 87-88 (1956). (37)

An electric stop motion, with signal lights, for stopping a can-fed roving frame when a sliver at the rear of the frame is broken.

SPEED FRAMES. Platts Bull. 9, No. 2: 38-41 (1956). (38)

Two refinements recently adopted as standard equipment on Platt MS2 speed frames, an electrically operated clutch in the drive between the motor and the jackshaft, and the use of single push button control switches, are described and their advantages summarized. Photographs. Diagram.

METHODS OF TEST FOR TEXTILES. PART 17. MEASUREMENT OF DRAFTING FORCES. J. Lako and C. Bevoort. Enka Breda Rayon Rev. (English ed.) 10: 174-183 (Nov. 1956). (39)

The principles, construction, and operation of the N. V. Onderzoekingsinstituut Research instrument for measuring drafting forces are described. Photographs. Diagrams. 4 references.

DRAFT PROPORTIONMENT. J. R. Corley and J. Simpson (Southern Regional Res. Lab.). Textile Ind. 120: 114-119 (Dec. 1956). (40)

Four variables (total draft, fiber fineness, weight sliver, and staple length) were evaluated to develop the proper proportionment of draft on 3 long-draft roving systems to insure that the unevenness of roving dependent on draft distribution would be held to a minimum. Formulas were developed and nomographs (available free from SRRL) constructed for calculating draft proportionment on each of the systems used. 9 references.

VERSATEX. Platts Bull. 9, No. 2: 28-35 (1956). (41)

Versatex LS, the new long staple drafting system for MS2 speed and MR3 ring frames, is based on a simple principle of apron and slip draft control which enables the short fibers present to be drafted efficiently. The system will give excellent results over a staple range of 2-3/8 in. to 8 in. (60 mm. to 200 mm.). Photographs. Diagrams. Tables.

SPRING WEIGHTING ARM FOR DRAW FRAMES. Tweedales & Smalley Ltd. Globe Rev. 2, No. 3: 84-86 (1956). (42)

Some advantages of this spring weighting arm for drawing frames are that the roller beam is not obstructed by hooks and levers which tend to accumulate fly and dirt, the removal of the rollers is very simple, and weight bounce is eliminated. Photographs.

SPINNING. WINDING. TWISTING B 4

UPDATE YOUR SPINNING EQUIPMENT. R. E. Pomeranz. Modern Textiles Mag. 37: 52-54 (Dec. 1956). (43)

Major areas to be considered in a modernization program are: (1) drafting systems; (2) ball bearing spindles, cylinders and tape tension pulleys, and related items; (3) open-type creels; and (4) suction cleaning.

ELECTRICAL BRAKING ON SPINNING FRAMES. Textile World 107: 99, 178 (Jan. 1957). (44)

Electrical braking is basically a system of stopping an a.c. motor by applying direct current to one phase of the motor. The advantages of its application to spinning frames are pointed out.

MAINTENANCE TIPS FOR WOOL RING SPINNING FRAMES. L. Bussiere (Davis & Furber Mach. Co.). Textile World 107: 121, 186 (Jan. 1957). Textile Ind. 121: 119-121 (Jan. 1957). (45)

FEATURES AND ADAPTABILITY OF THE WOOLEN RINGFRAME. PART 10. J. A. B. Mitchell. Textile Mfr. 82: 624-626 (Dec. 1956). (46)

The operation of the builder mechanism of the woolen ringframe is discussed. Diagrams.

WOOLEN SPINNING ON THE MULE. Wool Sci. Rev. No. 16: 3-14 (Nov. 1956). (47)

This review on mule spinning considers the separate operations performed, as well as the mechanical aspects of the mule. Graphs. 7 references.

"COMB SPINNING" PROCESS. J. Meimberg. Melliand Textilber. (English ed.) 37, No. 2: 116-122 (1956). (48)

On the "comb spinning" system each individual fiber is combed out of the sliver with a rotating comb, putting in twist at the same time; the finished thread passes through a reciprocating guide and is wound directly on to a crosswound bobbin. Details of the process and machine are given. Photographs. Diagrams.

TWIST MULTIPLIERS CAN BE MADE MORE ELASTIC. L. A. Fiori and J. E. Sands (Southern Regional Res. Lab.). Textile World 106: 123 (Dec. 1956). (49)

The maximum strength of cotton yarn on a twist-strength curve forms a plateau rather than a point. Spinning twist can be changed up to 0.5 TM without any significant change in yarn strength. Yarn break elongation should also be considered when twist changes are made.

SCHLAFHORST BKN GROOVED CYLINDER WINDER. H. Eigenbertz. Melliand Textilber. (English ed.) 37, No. 2: 122-131 (1956). (50)

Mechanical details and economic advantages of the Schlafhorst BKN grooved cylinder cone and cheese winder are discussed. The incorporation of an unwinding accelerator for eliminating kinks, end breakage, waste, and speed limits is a special feature. Photographs.

YARNS B 5

WATER TRANSPORT MECHANISMS IN TEXTILE MATERIALS. PART 1. THE ROLE OF YARN ROUGHNESS IN CAPILLARY-TYPE PENETRATION. N. R. S. Hollies, M. M. Kaessinger and H. Bogaty (Harris Res. Lab.). Textile Research J. 26: 829-835 (Nov. 1956). (51)

Increase in yarn roughness due to random fiber arrangement gives rise to a decrease in the rate of water transport. The measurement of water transport rates in yarns is thus a sensitive measure of the properties of fiber arrangement and yarn roughness in textile assemblies. 23 references.

A STUDY OF BLENDED WOOLEN STRUCTURES. PART 3. AMPLIFICATION AND EXTENDED APPLICATION OF THE THEORY OF BLEND STATISTICS. M. J. Coplan and W. G. Klein (Fabric Res. Labs.). Textile Research J. 26: 914-924 (Dec. 1956). (52)

Suitable statistical criteria were derived for use with experimental methods of measuring blend composition which involve gravimetric analysis of finite lengths of yarn, roving, or sliver. The same basic criteria of blend uniformity also apply to worsted-type yarns. 11 references.

DISTRIBUTION OF FIBERS IN SOME BLENDED WOOLEN YARNS. M. J. Coplan. Fabric Research Laboratories, Inc., Dedham, Mass., 1954. 129 p. Order from Office of Technical Services, Washington 25, D. C. $3.25. PB 121 471. Note in correction. 1955. 7 p. 50¢. PB 121 471s. (53)

Basic investigations for the purpose of improving the utilization of wool in navy fabrics.

HANDLING METALLIC YARNS. Dobeckmun Co. Textile Age 20: 20-22 (Dec. 1956). (54)

Methods of avoiding abuses in twisting, quilling, weaving, and bleaching Lurex yarns.

DEVELOPMENT OF HIGH TENACITY-HEAT STABLE DACRON YARNS. R. J. Coskren and T. T. Constantine. Wright Air Development Center, Wright-Patterson Air Force Base, Ohio, 1956. 48 p. WADC tech. report 55-297. (55)

In an attempt to develop Dacron yarn of optimum properties, as a replacement for nylon in deceleration parachutes, stretching temperatures, times, and amounts and sequences of stretching-relaxing systems were investigated. The optimum process so far developed consists of three basic steps: (1) 20% hot stretch at yarn temperatures of 340-390° F; (2) fixed length at 430-450° F; (3) free shrinkage at 350° F. Yarn produced by such a process has a tenacity of 6.7-7.0 grams/denier, an elongation of 14-16%, and a shrinkage of less than 2% at 350° F.

BULK ENKALON. J. G. Vos and R. S. Schortinghuis. Enka Breda Rayon Rev. (English ed.) 10: 161-167 (Nov. 1956). (56)

The principle underlying bulk Enkalon is the displacement of the filaments in a strong current of air, as the result of which loops project outwards from the body

of the yarn. This operation shortens the yarn, increasing the count and the volume. The yarn count increase is about 20% and a cloth woven with bulk Enkalon in the weft is roughly twice as thick as with ordinary Enkalon. Yarn properties and processing, as well as fabric scouring, setting, and dyeing, are covered.

EXTENSOMETRIC AND ELASTIC PROPERTIES OF TEXTILE FIBERS. B. Farrow (Shirley Inst.). (Letter to the editor). J. Textile Inst. 47: T650 (Dec. 1956). (57)

Revised table of tensile properties for Rhovyl yarn.

DEVELOPMENT OF TENASCO. Courtaulds Ltd. Textiles in Ind. 1: 141-143, 146 (Dec. 1956). (58)

Summary of the manufacture, properties, and uses of Tenasco, a high-tenacity viscose rayon yarn suitable for a wide range of industrial products. Photographs. Manufacturing diagram.

EFFECTS OF RAYON STAPLE DENIER BLENDING ON YARN PROPERTIES. C. J. Pope. Bull. Lowell Tech. Inst., Ser. 60, No. 2: 3-29 (Nov. 1956). (59)

This investigation on the blending of various fiber deniers of viscose rayon in varying proportions shows that fiber denier blending definitely modifies the physical properties of yarn. Details are given of theory, apparatus, materials, procedure, testing, discussion, and conclusions. 19 references.

SPINNING FANCY YARNS ON THE WOOLEN SYSTEM. Textile Recorder 74: 54-57 (Nov. 1956). (60)

Description of manufacturing methods and machinery for producing color mixture effects, fancy effects based on quality differences, fancy yarns based on the carding process, and twist yarns. Photographs. Diagrams.

FABRIC PRODUCTION C

WARPING, SLASHING, YARN PREPARATION C 1

CALCULATING LABOR COST FOR SPOOLING AND WARPING. J. M. Cooper. Textile World 106: 81 (Dec. 1956). (61)

Formulas based on piecework rates for Barber-Colman spoolers and warpers.

THE EFFECT OF RELATIVE HUMIDITY AND TEMPERATURE ON THE LIVELINESS OF VISCOSE CREPE YARN. J. M. Gregory (Brit. Rayon Res. Assoc.). J. Textile Inst. 47: T541-T548 (Oct. 1956). (62)

The conditions of temperature and relative humidity necessary to twist-set viscose crepe yarn, and the behavior of the yarn during the twist-setting process were investigated. A degreased unsized viscose crepe yarn was found to be adequately set after treatment of 60°C and 85% r.h. or higher. Twist-setting was improved by an increase of relative humidity at the given temperature. Increasing the temperature at any particular relative humidity lowered the couple in the yarn.

WARP SIZING. PART 8. THE SIZING PROCESS. P. V. Seydel. Textile Ind. 120: 128-139 (Dec. 1956). (63)

Size mix, sizing equipment, controls, and the operation of slashers are considered. Photographs. Diagrams.

WARP SIZING. PART 9. HOW TO CHANGE SETS, LEASING, AND DOFFING. P. V. Seydel. Textile Ind. 121: 100-108 (Jan. 1957). (64)

THE SIZING OF SPUN RAYON WARPS WITH SPECIAL REFERENCE TO WATER-SOLUBLE SIZES. E. P. Sharman and T. A. Pask. J. Textile Inst. 47: P942-P953 (Nov. 1956). (65)

Six sizing formulations showing the most promise, in terms of weavability, are recommended for spun rayon and spun rayon blends as a result of the analysis of data from experimental and commercial weaving trials. 2 references.

POLYVINYL ALCOHOL AS A WARP SIZE FOR VARIOUS STAPLE YARNS. E. Abrams, C. W. Rougeux and J. N. Coker. Textile Research J. 26: 875-880 (Nov. 1956). (66)

Polyvinyl alcohol was evaluated as a warp size for cotton, Dacron staple yarn, and blends of Dacron staple with cotton and viscose rayon. Under simulated weaving conditions, superior sizing performance on all these yarns was given by completely hydrolyzed, high viscosity product. This type of polyvinyl alcohol also proved to be effective as an extender for various sizes based on starch or modified starch. The size formulations tested are described.

SIZING MATERIALS QUICKLY EVALUATED. J. A. Roberts and E. K. McCall (Am. Viscose Corp.). Textile Ind. 120: 97-98 (Dec. 1956). (67)

American Viscose Corp. simulates actual mill scale slashing and weaving by use of a small slasher, designed to simulate the operating conditions of a mill scale slasher in all the fundamental phases of slashing. Details of the machine and test method are included.

SLASHER SIZING: FACTORS WHICH INFLUENCE DRYING EFFICIENCY. K. Ramaszeder. Textile Mfr. 82: 551-556 (Nov. 1956). (68)

Factors determining heat transfer efficiency in cylinder, air, and infrared dryers are examined, and recommendations for increasing slasher drying efficiency are made. Diagrams. 3 references.

WEAVING C 2

FABRIC DESIGN ON THE AUTOMATIC LOOM. PART 3. A. L. M. Bayoumi. Textile Recorder 74: 64-68 (May 1956). (69)

The advantages and operation of shuttle-changing automatic looms are discussed with particular emphasis on the Benninger range of looms. Diagrams.

FABRIC DESIGN ON THE AUTOMATIC LOOM. PART 4. A. L. M. Bayoumi. Textile Recorder 74: 55-57 (July 1956). (70)

Features of the Saurer range of automatic looms, with special reference to the double lift dobby, are covered.

FABRIC DESIGN ON THE AUTOMATIC LOOM. PART 5. A. L. M. Bayoumi. Textile Recorder 74: 57-58 (Aug. 1956). (71)

Illustrations of the elaborate designs possible with more picks than ends in the repeat.

LUERMANN DRUM FOR THE CONTROL OF CIRCULAR BOX MOTIONS. R. Grobeis. Melliand Textilber. (English ed.) 37, No. 2: 138-142 (1956). (72)

The Luermann drum operates without any cards, the box motion controlled by 2-armed, spring weighted design pegs operating in combination with a drum. The drive and actuation of the charge motion are described. Diagrams. Photographs.

CLOSED SHED DOBBY FOR BROADCLOTH LOOMS. Maschinenfabrik W. Brock Söhne. Melliand Textilber. (English ed.) 37, No. 2: 132-134 (1956). (73)

Features of the closed shed return motion dobby type EG. Photographs. Diagrams.

REINSHAGEN AND VAUPEL JACQUARD SMALLWARES LOOMS. E. Peuster. Melliand Textilber. (English ed.) 37, No. 2: 142-145 (1956). (74)

SPECIAL TIES TO INCREASE JACQUARD CAPACITY. O. Hughes. Textile Ind. 120: 104-107 (Dec. 1956). (75)

Outline of methods used in designing harness ties. Diagrams.

JUTE AND LINEN WEAVING. PART 3. LOOM AUXILIARY MOTIONS. CHAPTER 5. MEASURING MOTIONS AND PICK COUNTERS. W. Haggan. Textile Quart. 6, No. 4: 217-223 (1956). (76)

RATCHET TAKE-UP MOTIONS ON LOOMS. W. T. Swatek. Melliand Textilber. (English ed.) 37, No. 2: 134-138 (1956). (77)

Principles and various constructions of positive, negative, and compensating take-up motions are described, with reference to regular and irregular disposition of weft.

SELF-OSCILLATING INDUCTION MOTOR FOR WEAVING. P. J. Lawrenson (Metropolitan Vickers Elec. Co. Ltd). Research 9: 415-421 (Nov. 1956). (78)

The use of a three-phase induction motor, capable of producing a stable oscillation of the moving part without a switching device, for shuttle propulsion.

A STUDY IN LOOM FIXING. PART 11. F. D. Herring. Textile Bull. 82: 89-92 (Nov. 1956). (79)

Routine checking and preventive loom fixing for fixers lacking proper basic training.

STANDARD SETTINGS FOR PICKING-MOTION MAINTENANCE. E. P. Schremp. Textile World 107: 106, 174-176 (Jan. 1957). (80)

The repair and maintenance of type W-3 loom-picking motions can be simplified by: adopting standard settings; checking parts methodically; and replacing worn parts.

AUTOMATIC SHUTTLE CHANGE ON BOX LOOMS. R. Burgholz. Melliand Textilber. (English ed.) 37, No. 2: 145-148 (1956). (81)

An electrical control system for automatic shuttle changes on box looms is described. A wiring diagram is included.

A NEW LOOK AT LOOM ASSIGNMENTS. T. F. O'Connor. Textile Bull. 82: 78-81 (Dec. 1956). (82)

The O'Connor method for calculating what assignment will so balance the cost of labor and the loss of potential production through interference as to result in the maximum amount of profit is illustrated by a specific example.

ARE BATTERY FILLERS AN EXPENSIVE LUXURY? T. F. O'Connor. Textile Ind. 121: 87-89 (Jan. 1957). (83)

Using Ashcroft interference tables the author concludes that production would be gained, at no increase in labor cost, if all weavers and no auxiliaries are employed.

ESTIMATING JOBLOADS WHEN WEAVING JOBS ARE CHANGED. W. C. Westbrook. Textile World 106: 101 (Dec. 1956). (84)

Methods for setting up tentative jobloads pending accurate data from time study evaluation.

CLOTH PRODUCTION CONTROL. Textile Recorder 74: 59 (Nov. 1956). (85)

A simple filing system to give quick reference to the machinery available and cloth sorts being woven.

INDIVIDUAL LOOM RECORDS FOR CONTROLLING SUPPLY COSTS. W. C. Westbrook. Textile World 107: 112-113 (Jan. 1957). (86)

Records charging the cost of major supply items to individual looms help locate trouble spots, improve quality and output, show up inefficient loomfixing, and serve as an aid in personnel management. Sample records are included.

TABLET WEAVING. M. Schuette. Ciba Rev. No. 117: 2-29 (Nov. 1956). (87)

Rediscovery of tablet weaving, p. 2-3; Implements of the technique, p. 4-8; Geographical distribution of tablet weaving, p. 9-18; Prehistoric tablet weaves, p. 19-22; Medieval tablet weaving, p. 23-28. Photographs. 31 references.

THEORY OF PICKSPACING IN WOVEN FABRICS. K. Greenwood (Brit. Rayon Res. Assoc.). Skinner's Silk & Rayon Record 30: 1154-1160 (Nov. 1956). (88)

The relative importance of the cloth fell position, warp tension, loom speed, and of various properties of the loom, the warp, and the fabric, are studied. The method by which pickspacing is controlled in the conventional power loom is examined. Various causes of irregular pickspacing, particularly after loom stoppages, are discussed. Experiments are described for determining the cause of setting-on places on a particular loom, and possible ways of overcoming them. Diagrams. Photographs. Microphotographs.

THE POSITION OF THE CLOTH FELL IN POWER LOOMS. L. Waesterberg and G. Nordhammar (Swed. Inst. Textile Res.). (Letter to the editor). J. Textile Inst. 47: T604-T607 (Nov. 1956). (89)

A study of the causes of set marks concentrated on a study of the visco-elastic behavior of yarns and fabrics. A summary of this work is given here, and it is concluded that to overcome faulty setting-on places, it is, theoretically, not enough to restore the correct cloth fell position and warp tension, but the warp and the fabric should also be in the stable cycling condition. 9 references.

THE POSITION OF THE CLOTH FELL IN POWER LOOMS: REPLY. K. Greenwood (Brit. Rayon Res. Assoc.). (Letter to the editor). J. Textile Inst. 47: T608-T609 (Nov. 1956). (90)

KNITTING C 3

DEVELOPMENTS IN HOSIERY MANUFACTURING. PART 1. J. B. Lancashire. Textile Recorder 74: 54-56 (Aug. 1956). (91)

Trends in technique and machinery.

DEVELOPMENTS IN KNITTED GARMENT MANUFACTURING. PART 2. J. B. Lancashire. Textile Recorder 74: 52-55 (Sept. 1956). (92)

Review of improved methods of manufacture on flat knitting machines, garment-making circular machines, and straight bar machines of the Cotton's patent type. Photographs.

DEVELOPMENTS IN KNITTED GARMENT MANUFACTURING. PART 3. J. B. Lancashire. Textile Recorder 74: 60-63 (Oct. 1956). (93)

Loop wheel and sinker wheel machines, and developments in rib jacquard machines, are discussed. Photographs.

READING TRICOT MACHINE. W. E. Shinn. Knitter 20: 29-34 (Nov. 1956). (94)

Mechanical features, operation, and production possibilities are covered. Photographs. Graphs.

SEMIAUTOMATIC HAZU KNITTING MACHINE FOR SLEEVES. H. Neumann. Melliand Textilber. (English ed.) 37, No. 2: 148-150 (1956). (95)

HOW TO STRAIGHTEN FF NEEDLES. S. W. Bridges. Textile Ind. 121: 158-161 (Jan. 1957). (96)

Step-by-step directions illustrated by 10 photographs.

PATTERN DESIGN FOR BANNER KNITTING MACHINES. W. Shewmake. Textile Ind. 120: 135-139 (Nov. 1956); 167-169 (Dec. 1956). (97)

Mechanics of the machine, its knitting cycle, and terms and definitions used by designers of solid color socks are covered.

APPROACH TO FF WASTE. Textile Ind. 120: 163-165 (Dec. 1956). (98)

Supervisory waste control program for a full-fashioned hosiery mill.

HOSIERY STATISTICS, 1955. Nat. Assoc. of Hosiery Mfrs., 468 Fourth Avenue, New York 16, N. Y. 59 p. Free. (99)

This 22d annual statistical report summarizes, in table form, data on production, shipment, stocks, exports and imports, employment, and plants.

PATTERNING PRINCIPLES IN WEFT KNITTING. PART 2. PLATED LOOP STRUCTURES. PART 3. FLOAT PLATED STRUCTURES. J. Rab. Man-Made Textiles 33: 58, 61 (Oct. 1956); 56-58 (Dec. 1956). (100)

FABRICS C 4

A METHOD OF DEFINING A CLOTH TYPE IN TERMS OF STRUCTURAL PARTICULARS. A. Kemp and J. Pollitt. J. Textile Inst. 47: P954-P959 (Nov. 1956). (101)

The paper considers the relative merits of using various possible combinations of functions of threads per inch and counts. Graphs. Tables.

THE GEOMETRY AND PROPERTIES OF TWO-BAR TRICOT FABRICS. H. M. Fletcher and S. H. Roberts (U. S. Agri. Res. Serv.). Textile Research J. 26: 889-899 (Nov. 1956). (102)

A study was made of the geometry of 97 two-bar tricot fabrics knit of several deniers of acetate and viscose filament yarns knit with different courses per inch and runner ratios. Relationships were derived from the observed data of stitch length, diameter of yarn, runner ratios, wales and courses per inch, breaking strength, elongation, and bursting strength. 8 references.

FABRICS PLUS. Wellington Sears Co., 65 Worth Street, New York 13, N. Y., 1956. 26 p. Free. (103)

This summary of fabric uses with rubber, coatings, supported films, laminates, abrasives, etc., includes a chart of the characteristics of the principal textile fibers used in these applications. Photographs.

WOOL FABRICS: WOOL-WATER RELATIONS. Wool Sci. Rev. No. 16: 36-50 (Nov. 1956). (104)

Wool regain, heat of absorption, wet bulb theory of conditioning, thermostatic action, theories of water absorption and wettability, and waterproofness are discussed. Photomicrographs. Diagrams. 4 references.

BLENDED SUITINGS COMPARED. M. A. Morris, L. O. Lund and E. L. Phelps. J. Home Econ. 48: 774-778 (Dec. 1956). (105)

14 plain-weave suitings containing blends of Dacron, nylon, and Orlon with wool and rayon, together with all-Dacron, all-rayon, and all-wool fabrics, were studied. Breaking strength, bursting strength, and flat, edge, and flex abrasion were used as measures of durability. Ease of care, comfort, and appearance were evaluated by measurement of dimensional stability, stiffness, crease recovery, and air permeability. 4 references.

ARDIL/VISCOSE/NYLON BLEND FABRICS. Skinner's Silk & Rayon Record 30: 1275-1279 (Dec. 1956). (106)

Some typical Ardil/viscose/nylon blends and cloth structures are described. Swatches.

HOME TEST OF A DACRON/COTTON SHIRT. E. M. Sandgren and D. L. Sandgren. J. Home Econ. 48: 693-694 (Nov. 1956). (107)

This study indicates that a man's shirt made of 65% Dacron/35% cotton is comfortable, easy and economical to care for, and acceptable in appearance. The shirt did not need ironing, even after 100 hand washings, but it became dull and dingy after 75 washings. 2 references.

IMPROVED UTILIZATION OF WOOL IN NAVY FABRICS. M. J. Coplan. Fabric Research Laboratories, Inc., Dedham, Mass., 1955. 8 p. Order from Library of Congress, Washington 25, D. C. 50¢. PB 121 472. (108)

Summarizes government contract work on the performance of spun staple blends containing wool with nylon or viscose, and lists technical reports on this project.

INDEX TO THE TUFTED CARPET TRADE. Skinner's Silk & Rayon Record 30: 1311-1317 (Dec. 1956). (109)

A guide to manufacturers (mainly British) of carpets, tufting machinery, ancillary equipment, yarns, chemicals and backing compounds, dyestuffs, backing cloths, carpet labels, and fibers.

ADHESIVE BONDED FLOOR COVERING. A. Johnson (Univ. of Technology, Sydney). Textile Mfr. 82: 558-561 (Nov. 1956). (110)

The effects of variations in backing material and the type of adhesive, size of yarn, height of pile, spacing of tufts, loops vs tufts, and selection of yarns, on the commercial development of adhesive bonded tufted carpets are examined. Diagrams.

TEST OF HEAT LOAD IMPOSED BY PROTECTIVE CLOTHING. T. F. Hatch and others. U. S. Army Medical Research Laboratory, Ft. Knox, Ky., Sept. 1945. 8 p. Order from Library of Congress, Washington 25, D. C. Microfilm $1.80. Photocopy $1.80. PB 120 358. (111)

A positive pressure impervious ventilated suit, made of nylon fabric impregnated with neoprene, was ventilated by positive distribution of air. This study was undertaken to determine the volume, the temperature, and the water content of the ventilating air that would permit men to work in the suit with comfort in environments with dry bulb temperatures up to 120° F.

BINDERS FOR NONWOVEN FABRICS. N. H. Sherwood. Textile World 107: 81, 166-168 (Jan. 1957). (112)

The binder is the key material in the production of modern nonwoven fabrics, and its choice depends on the fibers to be used and the fabric end use. The various types of binders available, their application, and typical formulations used are summarized.

BOOM IN NONWOVEN FABRICS. Rohm and Haas Reptr. 14: 18-21 (Sept.-Oct. 1956). (113)

General survey of nonwoven fabric production and uses.

MACHINERY FOR NONWOVEN TEXTILES. J. H. Senior (Proctor & Schwartz Inc.). Textile Bull. 82: 72-74 (Dec. 1956). (114)

Brief review.

CONTROL AND SKILL PRODUCE PAPERMAKER'S FELTS. R. W. Pinault. Textile World 106: 104-105, 194, 198 (Dec. 1956). (115)

Description of processing at the Albany Felt Co. Photographs.

INDUSTRIAL TEXTILES. S. H. Sherman (U. S. Rubber Co.). Textile Research J. 26: 970-973 (Dec. 1956). (116)

The technological development of tire cord and Ustex cotton yarns are used as examples to highlight the importance of research to the growing use of industrial textiles. Tables. Photographs.

ORNAMENTATION OF APPAREL FABRICS: SPOT DESIGNS. PART 2. V. Lobl. Modern Textiles Mag. 37: 52-56 (Oct. 1956). (117)

Distribution orders and methods of avoiding take-up difficulties during weaving by proper design layout.

APPLICATIONS OF MOCK LENO WEAVES. D. C. Snowden. Man-Made Textiles 33: 56-57 (Sept. 1956); 54-55 (Oct. 1956). (118)

The features of gauze structures are described and illustrated. Methods of figuring with mock-leno interlacings in combination with ordinary weaves are presented.

APPLICATIONS OF BEDFORD CORD WEAVES. D. C. Snowden. Man-Made Textiles 33: 50-51 (Nov. 1956); 54-55 (Dec. 1956). (119)

DESIGN IN WOVEN STRUCTURE. PART 47. CRAMMED STRIPE DESIGNS (CONTD.). D. C. Snowden. Wool Rev. 30: 33-35 (Nov. 1956). (120)

DESIGN IN WOVEN STRUCTURE. PART 48. DOUBLE PLAIN CLOTH STRUCTURES. D. C. Snowden. Wool Rev. 30: 35-37 (Dec. 1956). (121)

FINISHING AND CHEMICAL PROCESSING D

ALPHABETICAL LIST OF NEW PRODUCTS DEVELOPED SINCE NOVEMBER, 1955. Am. Dyestuff Reptr. 45: 877-903, 910 (Dec. 3, 1956). (122)

Brief descriptions of new chemicals, coloring materials, and equipment.

HIGHLIGHTS OF THE PAST YEAR. P. J. Wood (Royce Chem. Co.). Am. Dyestuff Reptr. 45: 904-910 (Dec. 3, 1956). (123)

Review of new finishing developments and equipment. Photographs. Diagrams.

SOME OBSERVATIONS ON THE FINISHING OF TEXTILE FABRICS. C. S. Whewell. J. Textile Inst. 47: P851-P873 (Oct. 1956). (124)

Present-day views on the chemistry and practice of some of the more important operations (scouring, setting and crabbing, milling and felting, raising, blowing and pressing, and stabilization) involved in finishing loom-state wool-type materials. 19 references.

COMPRESSIVE SHRINKAGE OF FABRICS. B. C. M. Dorset. Textile Mfr. 82: 580-583 (Nov. 1956). (125)

Principles of shrinkage and machines for fabric compacting are reviewed. Diagrams.

CHEMICAL PROCESSES D 1

PEROXIDE BLEACHING OF MINOR VEGETABLE FIBERS. DuPont Tech. Bull. 12: 138-144 (Sept. 1956). (126)

General procedures for bleaching hemp, jute, sisal, ramie, panama, and miscellaneous vegetable fibers with Albone hydrogen peroxide and Solozone sodium peroxide.

BLEACHING WITH SODIUM-CHLORITE. F. Schmidt. Melliand Textilber. (English ed.) 37, No. 2: 154-160 (1956). (127)

Benteler-Werke AG procedures and machinery for continuous open-width sodium chlorite bleaching are described, and diagrams of bleaching ranges are included.

NEW OPEN WIDTH BLEACHING RANGE. F. Smith and Co. (Whitworth) Ltd. Textile Recorder 74: 84-86 (Dec. 1956). (128)

The Autobleach range has a scouring stage and a bleaching stage, each with impregnation unit, reaction chamber, and washing plant. Cotton and linen fabrics can be fully bleached in one passage at speeds of up to 50 yds./min., and spun rayons at speeds of up to 80 yds./min. Complete bleaching direct from gray cloth can be carried out in one hour. Diagrams.

SYNTHETIC LATICES FOR THE TEXTILE INDUSTRY. J. E. Warner (Goodyear Tire & Rubber Co.). Textile Ind. 121: 92-95, 135, 139, 143 (Jan. 1957). (129)

The new synthetic latices, aqueous dispersions of resins, rubbers, or thermoplastic materials, modify basic fabric and fiber properties and give desirable pigment binding properties in printing, dyeing, and flocking operations. Uses and application procedures are reviewed. 15 references.

CYANOETHYLATION OF COTTON. A joint report by the Inst. of Textile Tech., Charlottesville, Va., Am. Cyanamid Co., New York, N. Y., and Monsanto Chem. Co., St. Louis, Mo., 1956. 27 p. (130)

The history of the cyanoethylation of cotton is reviewed. The best processes which have evolved for batch and continuous treatment of yarn and fabric are described and the important variables of the processes discussed. Details which can serve as the basis for large-scale development by the textile industry are presented. The economics of the process have been estimated. 26 references.

ARE WE THINKING OF THE WASHER AND WEARER? J. Labarthe (Mellon Inst.). Textile Research J. 26: 957-959 (Dec. 1956). (131)

Discussion of the basic questions to be answered by the producer, by the fabric weaver, or by the finisher, if the retail-store buyer is to stay sold on wash and wear merchandise.

MINIMUM CARE FABRICS FROM VISCOSE RAYON. T. R. Scott, Jr. Textile Research J. 26: 966-970 (Dec. 1956). (132)

Requirements for minimum care fabrics, advantages of rayon, types of treatment available, and the use of filament vs. spun rayon and blends with other fibers are discussed. 7 references.

CELLULOSE INTERACTIONS WITH CERTAIN TEXTILE RESINS. E. E. Lineken, S. M. Davis and C. M. Jorgensen (Am. Cyanamid Co.). Textile Research J. 26: 940-947 (Dec. 1956). (133)

Infrared data and their correlation with treated fabric properties have been presented which, together with chemical evidence, show that chemical reactions take place between cellulose and formaldehyde, melamine formaldehyde resins, and urea formaldehyde resins. These chemical reactions are shown to be involved in the imparting of high wrinkle recovery properties. 7 references.

THE APPLICATION OF CREASE-RESISTANT FINISHES TO COTTON. A. R. Smith (B. I. P. Chemicals Ltd). Textile Research J. 26: 836-851 (Nov. 1956). (134)

Investigation of the effect of type of resin precondensate, degree of cure, washing off after resin treatment, and fabric construction, on strength after crease-resisting. 18 references.

MINIMUM CARE COTTON FABRICS. P. B. Stam, G. S. Y. Poon, M. J. Spangler and M. P. Underwood (Dan River Mills). Textile Research J. 26: 960-965 (Dec. 1956). (135)

Experimental data illustrating the effect of resin type and concentration, catalyst type and concentration, and fabric alkalinity on the properties of minimum care fabrics. 4 references.

AUTOMATIC DECATING MACHINE: PLANET-AUTOMAT MODEL. Kettling & Braun. Melliand Textilber. (English ed.) 37, No. 2: 178-180 (1956). (136)

THE EFFECT OF TREATMENT IN AQUEOUS PHENOL SOLUTIONS ON THE PHYSICAL PROPERTIES OF SECONDARY CELLULOSE ACETATE FILAMENTS. R. Jeffries and H. J. Wellard (Brit. Rayon Research Assoc.). J. Textile Inst. 47: T549-T566 (Nov. 1956). (137)

An investigation of the effect of concentration of phenol and of temperature on the mechanical properties of the yarn, molecular structure of the filaments, behavior of the surface of the filaments during extension, and the submicroscopic structure of the filaments suggests that the loss of strength during delustering treatment results partly from the reduction of chain orientation and partly from the formation of crystallites. 8 references.

HOME LAUNDERING OF WASH AND WEAR GARMENTS OF HYDROPHOBIC FIBERS. G. D. Rawlings, H. E. Stanley and P. R. Wilkinson (E. I. du Pont de Nemours & Co.). Textile Research J. 26: 974-980 (Dec. 1956). (138)

A systematic study carried out on the effect of fabric construction and laundering variables on the ease-of-care properties of Dacron, Orlon, and nylon, using the automatic washing machine and dryer, showed that ease-of-care performance can be obtained by the proper choice of fiber composition and yarn and fabric construction.

LAUNDERING OF TEXTILES MADE FROM MAN-MADE FIBERS. O. Viertel. Textile Mfr. 82: 589-592 (Nov. 1956). (139)

It is concluded from laundering experiments on Perlon hosiery and shirts that synthetic articles are not "fine wash" articles, and that white articles should preferably be washed with commercial detergents for white at 60° C, with yellowing or greying counteracted by the addition of a suitable optical bleach. Photomicrographs. Photographs.

TEXTILE USES FOR STABLE ULTRAVIOLET LIGHT ABSORBERS. G. M. Gantz (Antara Chemicals). Textile Bull. 82: 89-91 (Dec. 1956). (140)

Potential applications of stable ultraviolet absorbers to improve the lightfastness and weatherability of textiles.

MOTHPROOFING CARPETS. Whittall Co. Modern Textiles Mag. 37: 36, 50 (Dec. 1956). (141)

The Whittall method of permanently mothproofing carpets with Mitin, which may be applied simultaneously with dyes.

PRESERVATION OF INDUSTRIAL TEXTILES. Textiles in Ind. 1: 118-120, 122 (Nov. 1956). (142)

Metallic naphthenates have a high preservative value and do not lower fabric strength. Methods of application, and results of tests on underground fabrics and air filters are given. Photographs.

METHOD FOR CONTROLLING CATIONIC EXCHANGE IN COTTON. P. J. Hannan. Textile Research J. 26: 948-952 (Dec. 1956). (143)

The abnormally high copper content of cotton duck which has been impregnated with the solution of a copper salt is due to the adsorption of ionic copper by the cotton. This adsorption may be prevented completely by scouring the fabric and then applying the copper in the form of a water-soluble molecular complex. Citric acid and glycine form such complexes with copper and are effective in preventing its adsorption. 10 references.

THE EFFECT OF TEMPERATURE AND PERIOD OF IMMERSION IN BACKWASHING. P. P. Townend and R. K. Pitcher (Leeds Univ.). (Letter to the editor). J. Textile Inst. 47: T611-T612 (Nov. 1956). (144)

Prolonged stoppage during backwashing will affect the tear in combing, and this effect is exaggerated by an increased temperature of the scouring liquors.

MODIFICATION OF WOOL WITH MONOFUNCTIONAL ISOCYANATES. J. E. Moore. Textile Research J. 26: 936-939 (Dec. 1956). (145)

The reaction of wool with ethyl, octadecyl, phenyl, and alpha-naphthyl isocyanates under anhydrous conditions is described. At low uptakes these reagents confer marked resistance toward solubilization in hot acid; increasing uptakes reduce the felting shrinkage and impart stability to degradation by alkali and oxidizing and reducing agents. 9 references.

DYEING AND PRINTING D 2

DYES, DYEING AND TEXTILE PRINTING: SPECIAL SUBJECT LIST NO. 6. F. R. Taylor. The Library Assoc., Chaucer House, Malet Place, London, W.C. 1, England, 1956. 12 p. (146)

A selected book list. 143 references.

INTERNAL APPLICATION OF COLOR IN MANUFACTURE OF MAN-MADE FIBERS. E. I. Birnbaum and others. Can. Textile J. 73: 69-78 (Dec. 14, 1956). (147)

Pigment requirements for spun-dyed fibers, methods for incorporating pigments into the spinning dope, and colorfastness characteristics are covered. Tables. Microphotographs. 14 references.

DYEING SYNTHETIC FIBERS WITH CIBACETE COLORS. H. Stern. Ciba Rev. No. 117: 30-32 (Nov. 1956). (148)

Brief outline of the dyeing mechanism involved when applying disperse dyes to synthetic fibers. Microphotograph. 5 references.

SISAL FIBER AND ITS DYEING. K. H. Schmatzler (Allied Chem. & Dye Corp.). Dyestuffs 41: 210-214 (Dec. 1956). (149)

The paper discusses the dyeing of sisal for rug yarns, lists direct and acid dyes suitable for application from a neutral bath, and gives a formula and procedure for the use of a sulfur black.

DYEING VISCOSE RAYON AT HIGH TEMPERATURES. D. Cooke and A. N. Derbyshire. Hexagon Digest No. 24: 12-18 (Oct. 1956). (150)

The use of higher temperatures to apply direct and vat dyes to viscose rayon packages improves levelling and increases penetration, and so allows shorter dyeing times or simpler processes to be used. This article summarizes the development work necessary to establish the technique, and contains an account of the laboratory determination of rates of dyeing of direct dyes on viscose rayon at high temperatures. 5 references.

DYEING WITH METAL COMPLEX DYES WITHOUT SULFONIC GROUPS. K. Weible. Melliand Textilber. (English ed.) 37, No. 2: 160-166 (1956). (151)

Using suitable auxiliaries, e.g. Osimol, wool may be dyed with metal complex dyes containing no sulfonic groups, even under acid conditions. The process described is carried out at a pH near the isoelectric point, which is better for quality and hand than the so-called "neutral" method with ammonium salts. Dyeing polyamides by this method is also briefly discussed. 3 references.

ADDITIONAL NOTES ON WOOL DYEING. J. L. Waldo. Dyestuffs 41: 194-200 (Dec. 1956). (152)

Woolen and worsted processing effects upon selected dyes are discussed. Dyes which best withstand such processing (as shrinkproofing) or dyes which are most suitable for specific purposes (as cross-dyeing, speck dyeing, and disperse dyeing of blends) are listed wherever possible.

CROSS-DYEING ALL-WOOL FABRICS CONTAINING CHLORINATED WOOL. Wool Sci. Rev. No. 16: 15-22 (Nov. 1956). (153)

Detailed consideration of the possibilities of obtaining tone-in-tone and multi-color effects on all-wool materials composed of wool and chlorinated wool. Photographs. 2 references.

SMALL-SCALE HIGH-TEMPERATURE DYEING MACHINE. J. G. Graham and G. W. Jamin. Hexagon Digest No. 24: 19-22 (Oct. 1956). (154)

A small laboratory machine, specifically designed to dye 1-5 g. of loose fiber, slubbing, yarn, or fabric at high temperatures, consists of a gas-heated copper pressure vessel containing about 100 cc. of water. Six stainless steel pressure dyepots, fixed in a carrier, revolve end-over-end through 360°. Cooling is carried out by flooding the pressure vessel with cold water. Photographs. Diagram.

HIGH TEMPERATURE DYEING MACHINES. A. Datyner. Man-Made Textiles 33: 67-68 (Sept. 1956); 111-112 (Oct. 1956). (155)

The general principles underlying the construction of modern high temperature dyeing machines, such as the Steverlynck and Thermosol processes for dyeing loose fibers, slivers, and yarn in package form, are described.

APPLICATION OF VAT DYES TO YARN AND STOCK AT TEMPERATURES ABOVE 212° F. DuPont Tech. Bull. 12: 148-151 (Sept. 1956). (156)

A list of dyes satisfactory for application at 230° F in the leuco form for at least 30 minutes is given. Since some of these dyes are affected in shade by the high temperature, the effect is shown in comparison with a 190° F control dyeing. A typical method of application to packages is also described. 7 references.

PACKAGE DYEING POINTERS. G. L. Somani. Textile World 106: 117 (Dec. 1956). (157)

Pointers for minimizing dyeing difficulties due to uneven package density.

PACKAGE DYEING BLENDS OF DACRON/COTTON YARN. DuPont Tech. Bull. 12: 127-135 (Sept. 1956). (158)

Recommended procedure and dyes.

APPLICATION OF DYES TO WIDE CARPETS BY PAD-STEAM AND PAD-BECK METHODS. J. M. Fletcher. DuPont Tech. Bull. 12: 114-122 (Sept. 1956). (159)

The advantages of the pad over the beck method are pointed out. 2 references.

DISPERSE DYES: DEVELOPMENT AND APPLICATION. R. K. Fourness (Yorkshire Dyeware & Chem. Co. Ltd). J. Soc. Dyers Colourists 72: 513-527 (Nov. 1956). (160)

History, dispersion process, dyeing process, constitution and properties, and application of disperse dyes are covered. 64 references.

LIGHTFASTNESS OF DU PONT VAT AND DIRECT DYES ON JUTE. DuPont Tech. Bull. 12: 145-147 (Sept. 1956). (161)

Selected du Pont vat and direct dyes have been applied in weak strengths to a bright jute, and the dyeings subjected to light and washing tests. Results of the tests, shade change, and staining are recorded in tables.

SMOG STUDIES: EFFECT ON DYES AND FIBERS. PART 1. AATCC. Pacific S.W. Sect. Am. Dyestuff Reptr. 45: P919-P922 (Dec. 3, 1956). (162)

Introductory data on the effect of smog in the Los Angeles area on a variety of dyed textile materials are presented. Physical, chemical and geographical factors involving smog conditions are described. The testing program consisted of exposure under smog conditions of dyed woven and knitted fabrics, and rubberized and elastic fabrics. Testing comprised gas fading, tensile strength, pick count, and outdoor ageing. Photographs. 27 references.

DISCHARGE PRINTING OF PURE SILK. DuPont Tech. Bull. 12: 123-126 (Sept. 1956). (163)

Ratings of du Pont acid, direct, and developed dyes.

ROLLER PRINTING ON WOOL. AATCC. Rhode Island Sect. Am. Dyestuff Reptr. 45: P913-P918 (Dec. 3, 1956). (164)

Practical roller printing of fast dyes on wool piece goods can be accomplished by using conventional cotton equipment. The pretreatment of wool fabrics with Caro's acid or with sulfuric acid chlorination produces good color yield. Dyes giving bright shades and good to excellent fastness are: fiber-reactive dyes, insoluble azo dyes, and leuco-vat-esters. Vat dyes have only fair fastness properties, and cause losses in tensile strength. Pigment dyes show good tinctorial strength, but only fair fastness properties. 14 references.

ROLLER PRINTING MACHINE. E. Fälschle. Melliand Textilber. (English ed.) 37, No. 2: 180-184 (1956). (165)

The features of this 8-color machine include: improved drive of the printing roller spindles; remote-control electromagnetic register or repeat mechanism; oil-pressure mechanism for adjustment of printing rollers; independent-action hydraulic doctor motion; and improved bearing systems. Photographs.

AID TO QUALITY SCREEN PRINTING. Siebdruckgeräte von Holzschuher KG. Skinner's Silk & Rayon Record 30: 1260 (Dec. 1956). (166)

The sps squeegee grinder permits the squeegee to be ground along its entire length. The squeegee has a

contact length of up to 40 in. Rapid and precise grinding takes place without overheating or damaging the squeegee material. Diagrams. Photograph.

DRYING D 4

HOW TO SELECT AN INFRARED DRYING SYSTEM. Textile Ind. 120: 120-121 (Dec. 1956). (167)

An engineering approach to the infrared drying of coated fabrics. Photograph. Diagrams.

TESTING AND MEASUREMENT E

FIBERS E 1

HIGH SPEED FIBER EXTENSOMETER. M. M. Cross and D. A. Garrett. Skinner's Silk & Rayon Record 30: 1279-1280 (Dec. 1956). (168)

The instrument described covers the widest possible range of tests and, at the same time, provides testing times down to 0.01 seconds. Photographs. 3 references.

INFRARED SPECTROSCOPY AND FIBERS. J. Mann (Brit. Rayon Res. Assoc.). Skinner's Silk & Rayon Record 30: 1262-1265 (Dec. 1956). (169)

The theoretical aspects of infrared spectroscopy are discussed and its applications to the study of fiber structure explained. Photograph. Graphs. 6 references.

AIR FLOW THROUGH PLUGS OF TEXTILE FIBERS. PART 3. THE CAUSTICAIRE TEST FOR COTTON. E. Lord. J. Textile Inst. 47: T635-T649 (Dec. 1956). Shirley Inst. Mem. 29: 135-149 (Oct. 1956). (170)

The air flow estimates of mature fibers in the American system of classification, as assessed by the modified Causticaire test developed by Webb and Burley, are found to be biased to an extent partly depending upon the fiber fineness and a correction is developed to obtain a more exact prediction. Even the revised formula gives estimates which may be in error up to about $\pm$ 10%. It is concluded that estimates of either maturity ratio or of the proportion of mature fibers are not sufficiently accurate for use in critical comparisons of different samples. 10 references.

AIR-FLOW APPARATUS FOR ESTIMATING THE AVERAGE FIBER DIAMETER OF WORSTED SLIVERS. Internat. Wool Textile Org. J. Textile Inst. 47: P960-P964 (Nov. 1956). (171)

RAPID MILL ASSESSMENT OF WOOL PROCESSING. Anton Guillot KG. Textile Mfr. 82: 577 (Nov. 1956). (172)

Details of a miniature card and two-height condensing unit for conducting reliable tests from small wool samples.

YARNS E 2

EASY WAY TO CALCULATE YARN DIAMETER. B. L. Whittier and S. Mavlankar. Textile World 107: 94-95 (Jan. 1957). (173)

Simplified method of calculating yarn diameters without the use of instruments, which also shows the maximum number of ends of a specific size that can be placed side by side in 1 in. of lateral space.

SINGLE-THREAD BREAKING LOAD AND THE WINDING TEST. H. P. Stout and F. Stern (Brit. Jute Trade Res. Assoc.). J. Textile Inst. 47: T621-T634 (Dec. 1956). (174)

This paper investigates the relationship between the single-thread test and the winding test. For jute yarns, the single-thread frequency distribution is Gaussian as far as 3.5 standard deviation below the mean, but, at greater deviations, the breakages in the winding test may be higher than expected on this basis. For cotton yarns, published information on the winding test indicates that the Gaussian distribution holds only as far as about 2.5 standard deviation below the mean. The application of the theory to spinning end-breakages is discussed, and the use of the winding test in control testing is considered. Diagrams. Graphs. Table. 13 references.

STRESS-STRAIN RELATIONSHIPS IN YARNS SUBJECTED TO RAPID IMPACT LOADING. PART 4. TRANSVERSE IMPACT TESTS. J. C. Smith, F. L. McCrackin, H. F. Schiefer, W. K. Stone and K. M. Towne. Textile Research J. 26: 821-828 (Nov. 1956). J. Research Nat. Bur. of Standards 57: 83-89 (Aug. 1956). (175)

If a textile yarn segment, clamped at each end, is impacted transversely at the mid-point, the stress-strain curve for this yarn can be obtained from measurements on a high speed photographic record of the yarn's motion. This paper describes the apparatus and procedure used. Stress-strain curves are given for high tenacity nylon, Fortisan, and Fiberglas. 11 references. For parts 1-3 see TTD 12: 351, 524 (1955).

DEVICE FOR COUNTING NEPS. C. Nanjundayya and R. L. N. Iyengar. Indian Textile J. 66: 742-744 (Sept. 1956). (176)

Constructional details of an easily constructed nep-counting device for raw cotton, card web, and yarn. The specimen may be examined under transmitted or diffused light. Diagrams. 5 references.

ALTERNATIVE METHOD OF DETECTING PERIODICITIES IN YARN. W. J. Onions and A. Selwood (Leeds Univ.). (Letter to the editor). J. Textile Inst. 47: T603-T604 (Nov. 1956). (177)

Method of detecting periodicities in yarn by plotting a correlogram derived from measuring the mean deviation of a yarn passed through a measuring head in the form of a loop.

MILL TEST PROCEDURES. PART 6. GENERAL TESTS FOR BETTER MILL OPERATION. N. L. Enrick. Modern Textiles Mag. 37: 50-54 (Nov. 1956). (178)

Procedures, frequencies of sampling, and illustrations, covering tests for: (1) size of sliver, roving, and yarn; (2) settings and out-of-roundness of drafting rolls.

METHODS OF TEST FOR TEXTILES. PART 18. TIRE CORD GAUGE MEASUREMENT. A. van Gijzen. Enka Breda Rayon Rev. (English ed.) 10: 189-192 (Nov. 1956). (179)

In the N.V. Onderzoekingsinstituut Research tester the cord is subjected to a certain amount of pretension during the test and a square stamp ensures that equal lengths of all the threads are measured. The construction and operation of the tester are given. Photographs.

FABRICS E 3

SCORCHING CHARACTERISTICS OF FABRICS. AATCC. Wash. Sect. Am. Dyestuff Reptr. 45: P845-P856 (Nov. 19, 1956). (180)

A technique for scorching fabrics by contact with a heated metal surface and measuring the color change produced has been developed. Results indicate that scorching is more dependent on the chemical nature of the fiber or finishing treatment than on the physical form of the fiber or fabric. Appendix A: reflectance and color values used in calculating color difference. Appendix B: detail of fabrics used. 22 references.

MEASUREMENT OF THE STRENGTH OF FABRICS. Wool Sci. Rev. No. 16: 23-35 (Nov. 1956). (181)

Procedures for grab and strip tests are critically discussed, as well as testers such as constant rate of traverse, constant rate of loading, Denison T42, constant rate of specimen extension. Tearing strength, ballistic testing, bursting test, effect of relative humidity, and sampling are also touched upon. Photographs. Diagrams.

THE WING-RIP TEARING TEST. W. H. Ewing (Linen Ind. Res. Assoc.). (Letter to the editor). J. Textile Inst. 47: T609-T611 (Nov. 1956). (182)

The wing-rip tearing test described was designed to eliminate tear transfer from stronger to weaker threads. Photograph. Diagram. Table.

CHEMICAL DAMAGE IN WOOL. PART 1. DETERMINATION BY PAPER CHROMATOGRAPHY. W. H. Houff and R. H. Beaumont (F. C. Huyck & Sons). Textile Research J. 26: 871-874 (Nov. 1956). (183)

A paper chromatographic method for determining the extent of damage by oxidizing or alkaline solutions to wool fabrics of unknown history is described. The presence of other textile fibers does not constitute an interference. 28 references.

GRADING FABRICS OF BLENDED SYNTHETICS. M. Chagro. Textile Ind. 120: 108-110 (Dec. 1956). (184)

A point system is described for synthetic blends which permits the assignment of a particular piece to the

color depth which will aid in reducing the gravity of the defects. All defects are listed, and the points assigned to each defect depend upon its seriousness. The point total can be used as a yardstick in determining quality and recommended shade for dyeing. A sample report is included.

STANDARDS: A REALITY FOR TODAY'S TEXTILE CONSUMERS. H. T. Hallowell, Jr. and others. J. Home Econ. 48: 758-760 (Dec. 1956). (185)

Summary of a symposium on textile standards at the textiles and clothing section meeting of the American Home Economics Association.

OTHER E 4

DETERMINATION OF CELLULOSIC AND GLASS FIBERS IN MIXTURES WITH ASBESTOS. C. Z. Carroll-Porczynski (Brit. Belting & Asbestos Ltd). (Letter to the editor). J. Textile Inst. 47: T651-T652 (Dec. 1956). (186)

THE DETERMINATION OF MICRO-QUANTITIES OF SULFATE ION DERIVED FROM SMALL SAMPLES OF TEXTILE MATERIAL. J. M. Bather. J. Textile Inst. 47: T567-T569 (Nov. 1956). Shirley Inst. Mem. 29: 115-117 (Sept. 1956). (187)

The volumetric method of Belcher, Gibbons, and West, particularly the filtration procedure, has been modified to permit the rapid estimation (12 samples a day) of small amounts of sulfate ion (0.1 to 2.0 mg). 4 references.

A CENTURY OF PROGRESS IN DEVELOPMENT OF COLORFASTNESS TEST METHODS FOR TEXTILES. M. L. Staples (Ontario Res. Found.). Can. Textile J. 73: 49-53 (Nov. 30, 1956); 80-89 (Dec. 14, 1956). (188)

The important contributions that have led to the development of present-day colorfastness tests are reviewed. 130 references.

CLASSIFYING DETERGENTS. PART 2. E. J. Quinn and J. V. Karabinos (Blockson Chem. Co.). Soap Chem. Specialties 32: 39-41 (Nov. 1956). (189)

Qualitative tests for commercial detergents utilize foam depression and refractive index measurements. Tables. For part 1 see TTD 11: 311 (1954).

WASH RESISTANCE OF EMBOSSED AND SCHREINER EFFECTS. K. May and O. Rothe. Melliand Textilber. (English ed.) 37, No. 2: 166-170 (1956). (190)

A method of evaluating the wash resistance of embossed and Schreiner effects by means of impressions made by the fabric is described. The preparation of the impressions is explained. The evaluation is carried out by using photographs of impressions made by washed samples and comparing them with a standard scale. Suggestions and examples are given for the preparation of such a scale. Microphotographs.

COMPARATIVE EXPOSURE TESTS WITH DAYLIGHT AND ARTIFICIAL LIGHT. A. Schaeffer. Melliand Textilber. (English ed.) 37, No. 2: 170-178 (1956). (191)

See TTD 13: 262 (1956).

TEMPERATURE AND RELATIVE HUMIDITY IN LIGHTFASTNESS TESTING. K. McLaren (Imp. Chem. Ind. Ltd). J. Soc. Dyers Colourists 72: 527-537 (Nov. 1956). (192)

Differences in effective humidity can cause variations of as much as four grades in lightfastness testing, while differences in temperature are unlikely to affect results. While preferred conditions for fading lamp operation will ensure results closest to daylight exposures, the excess of ultraviolet radiation emitted by the enclosed carbon arc can also cause anomalies, which it is not practicable to overcome. Exposures in carbon-arc fading lamps, even under the preferred conditions of effective humidity, must not be regarded as always equivalent to daylight testing. 18 references.

APPLICATION OF ELECTRICAL INSTRUMENTS FOR MEASURING MOISTURE CONTENTS OF TEXTILES. AATCC. N. Y. Sect. Am. Dyestuff Reptr. 45: P935-P945 (Dec. 17, 1956). (193)

The instruments employed for measuring moisture are described in detail, together with comparative results of oven-drying techniques. A considerable number of textile additives, dyes, resins, etc., were covered in order to determine their influence with respect to a given instrument. Photographs. Tables. Graphs. 25 references.

DETERMINATION OF UREA-FORMALDEHYDE RESINS IN COATINGS VIA UREA ANALYSIS. M. H. Swann and G. G. Esposito. Anal. Chem. 28: 1984 (Dec. 1956). (194)

The release of ammonia from urea-formaldehyde coating resins on treatment with alkali is characteristic. It provides a rapid quantitative means of analyzing coatings for urea resin modification, or of determining urea in urea-formaldehyde resins.

WASH-RESISTANT FINISHES. G. Strauch. Melliand Textilber. (English ed.) 37, No. 2: 150-152 (1956). (195)

After a brief review of existing methods for determining wash-resistance of finishes, the author describes a simple method in which the finishing agent is applied to filter-paper strips (dried to constant weight and weighed), which are then dried and condensed, if necessary, under the same conditions as the respective textile material and tested.

INDUSTRIAL ENGINEERING F

MACHINERY AND MAINTENANCE F 1

STANDARD EFFICIENCY COMPUTATIONS. T. F. O'Connor. Textile Bull. 82: 92-93 (Nov. 1956). (196)

Ashcroft method of computing magnitude of losses due to machine interference.

MARGINAL COST ANALYSIS APPLIED TO THE PROBLEM OF MACHINE INTERFERENCE. J. O'Shaughnessy. J. Textile Inst. 47: P874-P878 (Oct. 1956). (197)

ACCURACY OF WORK MEASUREMENT. D. L. Cooper and J. G. Miller (Wool Ind. Res. Assoc.). J. Textile Inst. 47: T613-T620 (Dec. 1956). (198)

The application of statistical theory to results obtained from work studies is discussed. Formulas are developed for obtaining the accuracy of an estimate of work-load, and for predicting the optimum division of time between frequency and time studies such that, with a given amount of observer time, the most accurate estimate is obtained.

INDUSTRIAL BUILDINGS AND AIR CONDITIONING PLANTS. F. Kastner. Melliand Textilber. (English ed.) 37, No. 2: 200-204 (1956). (199)

The air conditioning requirements for various types of textile mill buildings, and the effect of the type of machinery and the design of the building on these requirements, are discussed. Photographs.

FIRES IN THE TEXTILE FINISHING TRADE. D. W. Millar and J. F. Fry. J. Textile Inst. 47: P879-P893 (Oct. 1956). (200)

A statistical analysis of reports of fires attended by fire brigades in the United Kingdom 1946-50, shows that the total loss from fires in the textile finishing industry is exceeded only in 3 other occupancies. The causes of the fires are examined and recommendations for their prevention made.

STAINLESS STEEL REPORT TO THE TEXTILE INDUSTRY. Allegheny Ludlum Steel Corp., Pittsburgh, Pa., 1955. 39 p. Free. (201)

Examples of stainless steel use in yarn and warp preparation, weaving, knitting, and wet processing are illustrated with photographs and diagrams. A table of comparative physical and chemical properties and corrosion resistance of various stainless types is included.

THREE-PHASE SHUNT-WOUND MOTORS IN THE TEXTILE INDUSTRY. G. Kadegge. Melliand Textilber. (English ed.) 37, No. 2: 184-198 (1956). (202)

The principles and construction of these motors are outlined, and their extensive use in the textile industry is reviewed in detail. Wiring diagrams for various applications are included. Photographs.

CROWNING RUBBER ROLLS. A. W. Beucker (Raybestos-Manhattan, Inc.). Textile World 107: 102-103 (Jan. 1957). (203)

Method of calculating crown from nip widths. Diagrams.

ELECTRIC CLUTCH APPLICATION TO TEXTILE MACHINES. Westool Ltd. Globe Rev. 2, No. 3: 93-94 (1956). (204)

The use of the Warner electric clutch to supplant pulley drives on Hopper machines and for reversing can rotation on the A.10 bi-coil drawing frame is described. Photographs.

NON-STIK. Platts Bull. 9, No. 2: 46-47 (1956). (205)

Non-stik is a new process for coating surfaces which are subject to sticking of materials. It is of particular value in sizing because it prevents the yarn from sticking to drying cylinders or guide rollers.

QUALITY CONTROL F 3

DETERMINING YARN STRENGTH CONTROL LIMITS. E. G. Field. Textile Ind. 121: 109-112 (Jan. 1957). (206)

The procedure for analyzing data and setting up control limits for yarn breaking strength, when manufacturing a variety of single yarns in several mixes, is explained. Tables. Graphs.

STATISTICAL QUALITY CONTROL: FREQUENCY DISTRIBUTION, STANDARD DEVIATION, OR AVERAGE AND RANGE? F. Vogel. Textile Bull. 82: 75-77 (Dec. 1956). (207)

The simplicity, practicality, and applicability of these methods are compared, and it is concluded (1) that frequency distribution is the simplest, and is easy to install and easy to follow; (2) the average and range is quite simple, and is very reliable as a guide to performance; (3) the standard deviation is somewhat difficult for the average foreman and supervisor.

STATISTICAL QUALITY CONTROL: MODERN MANAGEMENT TOOL. L. H. Hance. Modern Textiles Mag. 37: 61-64 (Dec. 1956). (208)

Explanation of the basic tools for developing a program of statistical quality control which can be used to control a process with precision; to isolate sources of variation; to assist in correcting trouble; and to improve quality, production, running quality, morale, and cost. Diagrams.

FINANCIAL GAIN FROM STATISTICAL QUALITY CONTROL. T. Hanada. Bull. Quality Control Assoc. Bangalore 3: 14-16 (May 1956). (209)

System for computing profits from statistical quality control in a spinning mill.

SCIENCES G

CHEMISTRY G 1

SOILING CHARACTERISTICS OF TEXTILE FIBERS. PART 2. A. S. Weatherburn and C. H. Bayley (Nat. Res. Council of Canada). Can. Textile J. 73: 69-71 (Sept. 21, 1956); 56-59 (Oct. 5, 1956). (210)

In part 1 factors contributing to the soiling of textile materials were discussed and a method was described

for measuring "effective soil content" of soiled fibers. In part 2 the soiling of a series of man-made fibers has been studied, particularly the relation between soil retention and various physical fiber characteristics. 9 references. Part 1 was published in Textile Research J. 25: 549-558 (June 1955).

PROGRESS REPORT OF THE STANDARD SOILS COMMITTEE. AATCC. Standard Soils Comm. Am. Dyestuff Reptr. 45: P946-P950 (Dec. 17, 1956). (211)

A standard washing procedure to investigate the utility of artificially soiled fabrics and a standard procedure for measuring fabric reflectance have been developed. A method for presenting data is specified. The data obtained required statistical treatment to establish the limits of reliability. Wash test data for the same soil on cotton and on staple-fiber fabrics of rayon, acetate, silk, nylon, Orlon, Dacron, Dynel, and Acrilan are given. It is concluded that a single standard soiled fabric to include all end uses of detergents is not feasible, but the development of specific standard soiled fabrics is possible.

STEREOSPECIFIC CATALYSIS AND ISOTACTIC POLYMERS. G. Natta. Modern Plastics 34: 169-182, 261-263 (Dec. 1956). (212)

Interpretation of experimental results in the synthesis of stereospecific polymers, obtained at the Institute of Industrial Chemistry at the Milan Polytechnic. 34 references.

ISOTACTIC POLYMERS: POTENTIAL NEW FIBERS. J. W. S. Hearle. Research 9: 461-465 (Dec. 1956). (213)

The production of raw materials by controlling the geometrical configuration of the molecules is discussed, and the properties of fibers produced by this method are compared with nylon and Terylene. 3 references.

POLYMER PROGRESS: 1956 SERIES. PART 4. IMPROVED POLYMERS AND COPOLYMERS OF ACRYLONITRILE. J. A. Somers. Man-Made Textiles 33: 49-50 (Dec. 1956). (214)

POLYMERS AND COPOLYMERS OF ACRYLONITRILE. American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N. Y., 1956. 76 p. (215)

Monomer reactivity ratios and their utilization in designing experimental procedures are discussed, preferred laboratory techniques for polymerizing and copolymerizing acrylonitrile are presented, and numerous examples of acrylonitrile polymers, as applied to various industries, are given.

PHYSICS G 2

LOW-POWER RADIOACTIVE TRACERS IN AGITATION STUDIES. W. S. Durant and R. E. Wingard. Alabama Polytechnic Institute, Auburn, Ala., 1956. 12 p. Engineering bull. no. 26. (216)

The applicability of a low-power radioactive tracer in determining the patterns of flow and establishing an index to the degree of homogeneity produced by an impeller and baffles was examined, and a new experimental method of determining flow distribution in mixing vessels was developed.

APPLICATION OF TRACER TECHNIQUE IN TEXTILE SPINNING TECHNOLOGY. A. N. Gulati. Indian Textile J. 66: 734-737, 741 (Sept. 1956). (217)

Brief review of advances in tracer technique applications in the textile industry, e.g., Shirley static eliminator, lap thickness gauge, fiber movement in drafting, and fiber arrangement. 5 references.

RADIOISOTOPES AS TRACERS: THE RATIONAL APPROACH. J. R. Catch. Research 9: 479-484 (Dec. 1956). (218)

It is pointed out that most uses of isotopes as tracers do not require the handling of large quantities of the more dangerous radioactive materials, and consequently do not require exceptional laboratory facilities. Information on tracer methodology, tracers available, and laboratory facilities necessary is included. 43 references.

WHAT RADIOISOTOPES CAN DO FOR TEXTILES. R. W. Pinault. Textile World 107: 77-80 (Jan. 1957). (219)

Summary of radioactive tracer use for yarn lubricants, sizing formulas, bleach baths, dye-baths, coating mixtures, detergents, cloth testing, and analytical work. Photographs. Diagrams. 5 references.

STATIC ELECTRIFICATION OF FILAMENTS: THEORETICAL ASPECTS. S. P. Hersh and D. J. Montgomery (Textile Res. Inst.). Textile Research J. 26: 903-913 (Dec. 1956). (220)

A theoretical model based on the band structure of the solid state is proposed, in order to describe the transfer of charge when two solids are rubbed together. Only the structure in the interior is considered. The theory is applied to data on static electrification of filaments rubbed together under controlled ambient and mechanical conditions and provides a semiquantitative description of most of the observed phenomena. 13 references.

STATIC ELECTRIFICATION OF FILAMENTS. J. B. Levy and J. H. Dillon (Textile Res. Inst.). (Letter to the editor). Textile Research J. 26: 953 (Dec. 1956). (221)

From experiments described it is concluded that, in certain cases, part of the triboelectrically generated charge resides within the volume of the fiber, and thus can be removed only by exposure to penetrating beta and gamma radiations.

MISCELLANY H

TEXTILE INDUSTRIES ANNUAL EQUIPMENT PARADE AND BUYER'S GUIDE 1956. Textile Ind. 120: 3-292 (Mid-Nov. 1956). (222)

New developments in equipment and materials, processing techniques, and services, divided into 10 sections, in each of which is an equipment review, list of free booklets, and a buyer's guide. Section 11 is an alphabetical list of suppliers and addresses.

TEXTILE EDUCATION IN INDIA WITH SPECIAL REFERENCE TO WEST BENGAL. B. C. Bhattacharya. J. Textile Inst. 47: P934-P941 (Nov. 1956). (223)

PATENT CHECKLIST

U. S. patents may be obtained from the U. S. Patent Office, Washington, 25, D. C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

PATENTS: FIBERS/YARN PRODUCTION
Abstr. 224 - 230

PATENTS: YARN PRODUCTION
Abstr. 231 - 237

FIBERS A

MAN-MADE FIBERS A 2

ELECTRICALLY CONDUCTIVE VISCOSE FIBERS CONTAINING CARBON BLACK. Pirelli SpA. BP 743 909, Jan. 25, 1956. Through BCIRA 36: 580 (1956). (224)

YARN PRODUCTION B

DETECTOR STOP MECHANISM ON FAILURE OF RUNNING YARN OR SLIVER. E. Pearson (to Elec. Products (Colne) Ltd). BP 743 612, Jan. 18, 1956. Through BCIRA 36: 550 (1956). (225)

STRAND CONTROLLED STOP MOTION DEVICE. E. Breuning (Germany). BP 743 905, Jan. 25, 1956. Through BCIRA 36: 584 (1956). (226)

STAPLE FIBER SLIVERS FROM CONTINUOUS FILAMENT TOWS. J. Clarkson (to Brit. Nylon Spinners Ltd). BP 743 943, Jan. 25, 1956. Through BCIRA 36: 580 (1956). (227)

CARDING AND COMBING B 2

COILING MACHINERY. J. S. Dudley (to Whitin Mach. Works). USP 2 770 016, Nov. 13, 1956. (228)

A single coiler head having a delivery passage that will satisfactorily deliver slivers of widely differing sizes and composition.

COILER TUBE GEAR. G. C. Anderson and P. B. West (to Saco-Lowell Shops). USP 2 770 845, Nov. 20, 1956. (229)

Tube gear in which the lower orifice of the tube is circular, so that sliver may fall freely and without damage.

CONTINUOUS CARDING MACHINE. H. C. M. H. Duesberg (Belgium). USP 2 771 641, Nov. 27, 1956. (230)

Continuous carding machine operating without interruption when the endless conveyor belt, upon which the web of fibers is deposited, is stopped for the removal of the accumulated layers of carded web.

DRAWING AND ROVING B 3

LAP DRAFTING SYSTEM FOR SLUBBING, ROVING, SPINNING, AND TWISTING FRAMES. J. J. Keyser (to Schiess AG). USP 2 769 209, Nov. 6, 1956. (231)

Draft or delivery mechanism in which the retarding function is determined by the wedge angle formed between the lap and a carrying element.

SADDLE WEIGHTING MECHANISM FOR TOP DRAFTING ROLL. R. Balmes Solanas (to Estirajes Balmes, SA). USP 2 769 210, Nov. 6, 1956. (232)

DRAFTING MACHINERY. J. M. B. Aymerich (Spain). USP 2 771 639, Nov. 27, 1956. (233)

Long draft system, in which the sliver leaves the drawing rolls of the first drafting stage as a compact, uniform strand.

BALL BEARING TOP ROLL. L. M. Cotchett. USP 2 771 640, Nov. 27, 1956. (234)

Top roll for center-support type frames, operating on anti-friction type bearings, in which the bosses are fixed on the shaft and cannot depart from the common plane of the two axes.

SPINNING, WINDING, TWISTING B 4

SADDLE WEIGHTING MOTION FOR THREE TOP ROLLERS OF A 4-LINE DRAFTING SYSTEM. R. Balmes Solanas (to Estirajes Balmes SA). BP 743 084 and 743 099, Jan. 11, 1956. Through BCIRA 36: 550 (1956). (235)

DEVICE FOR PRODUCING RANDOM SLUBS IN A YARN. S. Roscoe (to Hayeshaw Ltd). BP 743 335, Jan. 11, 1956. Through BCIRA 36: 550 (1956). (236)

LUBRICATION OF RINGS AND TRAVELERS. T. Nesbitt-Dufort (to Fairbairn Lawson Combe Barbour Ltd). BP 743 468, Jan. 18, 1956. Through BCIRA 36: 550 (1956). (237)

BEARINGS FOR A WINDING AND TWISTING SPINDLE. F. Scragg (to S. & E. Scragg Ltd). BP 743 751, Jan. 25, 1956. Through BCIRA 36: 584 (1956). (238)

CREEL ARRANGEMENT FOR A DOUBLE-SIDED SPINNING FRAME. W. Auerswald (to VEB Spinn- und Zwirnerei Maschinenbau). BP 743 961, Jan. 25, 1956. Through BCIRA 36: 584 (1956). (239)

CONSTANT YARN SPEED TWISTING AND WINDING MACHINE. J. V. Keith (to Universal Winding Co.). USP 2 769 299, Nov. 6, 1956. (240)

Twisting and winding machine in which a single control unit operates to start the machine, stop it, moves its winding units to doffing position, and moves its winding units to starting position. The twisted yarn is wound in a package capable of being shipped and/or used without further processing.

REMOVAL OF SURPLUS YARN FROM BUTT END OF BOBBINS. R. P. Drake, R. E. Borchardt and C. B. Crandall (to Barber-Colman Co.). USP 2 769 598, Nov. 6, 1956. (241)

SPINDLE BRAKE. E. S. Wood (to Whitin Mach. Works). USP 2 770 092, Nov. 13, 1956. (242)

SPINNING FRAME. E. C. Gwaltney (to Saco-Lowell Shops). USP 2 770 093, Nov. 13, 1956. (243)

Spinning frame lifter mechanism which permits the use of greater lifter motion travel without increasing the vertical height of the frame.

WINDING DEVICE. L. Herele and F. Ihls (to Farbwerke Hoechst AG). USP 2 772 054, Nov. 27, 1956. (244)

Automatic winding apparatus for continuously winding thick tows, delivered at high speed from a set of spinnerets, permitting automatic carrier changing without interruption of the winding.

YARNS B 5

CRIMPED OR CRINKLED SYNTHETIC FIBER YARNS. J. Tunnicliffe (to G. H. Heath & Co. Ltd). BP 743 906, Jan. 25, 1956. Through BCIRA 36: 584 (1956). (245)

COMPOSITE YARN. W. G. Luttge (to Chemstrand Corp.). USP 2 769 300, Nov. 6, 1956. (246)

Composite yarns which are wind and water resistant are produced by spinning hydrophobic fibers, such as acrylonitrile, around a prespun hydroscopic core yarn, such as viscose rayon.

GLASS FIBER TWINE. A. R. Morrison and H. E. Fargo (to Owens-Corning Fiberglas Corp.). USP 2 770 940, Nov. 20, 1956. (247)

Paper-glass fiber twine consisting of a core of compacted paper and an exterior sheath of continuous filament glass fiber strands, adhered together and to the core by an adhesive.

NYLON CREPE YARNS AND FABRICS. C. R. Ephland (to Patentex, Inc.). USP 2 771 660, Nov. 27, 1956. (248)

Nylon crepe yarns are produced by twisting nylon yarn, setting the twist, heating for at least 15 minutes up to 300° F, conditioning, and then untwisting.

STRETCH YARNS. W. J. Leath and F. E. Bobo, Jr. (to Patentex, Inc.). USP 2 771 733, Nov. 27, 1956. (249)

A continuous filament knitting yarn, which is twisted, heat set, and subsequently twisted without further heat setting, has a permanent tendency to untwist, resulting in a permanent liveliness which, when the yarn is knitted under tension, causes substantial distortion of the stitches, thus imparting stretchable characteristics to the fabric.

FABRIC PRODUCTION C

WARPING, SLASHING, YARN PREPARATION C 1

YARN SIZING. S. T. Bowen and F. Fortess (to Celanese Corp.). USP 2 769 727, Nov. 6, 1956. (250)

Sizing cellulose acetate yarn with an aqueous ammoniacal solution of an acidic, water-insoluble linear polymer containing carboxylic acid groups eliminates the need for subsequent scouring and finishing treatments.

YARN TENSION DEVICE. H. Stanier (Wales). USP 2 771 254, Nov. 20, 1956. (251)

Yarn tension device for controlling yarn being drawn off over end from bobbins or other packages during warping.

WEAVING C 2

WARP THREAD TENSIONING DEVICES FOR CIRCULAR LOOMS. St. Frères. BP 743 100, Jan. 11, 1956. Through BCIRA 36: 553 (1956). (252)

MEANS FOR GUIDING THE SELECTOR PINS OF CARPET LOOM JACQUARDS. H. Arrowsmith (to George Edmonds Ltd). BP 743 314, Jan. 11, 1956. Through BCIRA 36: 553 (1956). (253)

WEFT SELECTION MECHANISM FOR LOOMS. F. Davies, J. F. Moseley and I. H. Thomas (to Brit. Cotton Ind. Res. Assoc.). BP 743 525, Jan. 18, 1956. Through BCIRA 36: 553 (1956). (254)

RECORDING DEVICE PERMITTING AUTOMATIC SHUTTLE CHANGING WITHOUT STOPPING THE LOOM OR USING ELECTRICAL DEVICES. E. A. Butin (France). BP 743 863, Jan. 25, 1956. Through BCIRA 36: 587 (1956). (255)

DISCHARGING EMPTY SHUTTLES FROM AN AUTOMATIC LOOM. E. A. Butin (France). BP 743 920, Jan. 25, 1956. Through BCIRA 36: 587 (1956). (256)

OPEN-MESH FABRIC. R. J. Southwell. USP 2 769 222, Nov. 6, 1956. (257)

Loom for producing woven fabrics in which the strands are coated and the warp and weft strands are bonded to one another at their places of crossing.

LOOM HARNESS. F. H. Kaufmann (to Steel Heddle Mfg. Co.). USP 2 769 461, Nov. 6, 1956. (258)

Harness frames with means for supporting the heddle bars to eliminate or minimize wear.

NARROW LOOM. C. F. Libby. USP 2 769 462, Nov. 6, 1956. (259)

Narrow loom with fingers or needles which project loops of weft yarn through the shed of warp yarns alternately from opposite sides of the shed. To prevent ravelling of the web and provide a sightly selvage, the ends of the loops are caught after they have been projected through the shed and are knitted to other loops or to special selvage yarns or to both.

LOOM STOP-MOTION. R. B. Delaney (to Bates Mfg. Co.). USP 2 769 463, Nov. 6, 1956. (260)

Stop-motion device for a filling-change type loom, e.g. Draper or Northrop, is designed to initiate a bobbin change only where filling breaks are most frequent and when imperfections in the weave are less likely to occur.

SHUTTLE THREADING. R. G. Turner (to Crompton & Knowles Loom Works). USP 2 770 261, Nov. 13, 1956. (261)

Threading operation effected by pneumatic action on the thread end drawn from the stationary weft supply, so that it is held stationary during gripping.

LOOM DRIVE. C. G. Moon (to Draper Corp.). USP 2 771 097, Nov. 20, 1956. (262)

Use of a combined motor, brake, and clutch unit driving through a simple gear and V-belt transmission.

NARROW LOOM PICKING MOTION. E. A. Ross. USP 2 771 098, Nov. 20, 1956. (263)

Conversion of a wide goods loom to a narrow fabrics loom and improved picking motion for use with conventional or converted narrow fabric loom.

PICKING MECHANISM CHECK. G. W. Pearce (to Crompton & Knowles Loom Works). USP 2 771 099, Nov. 20, 1956. (264)

Arresting the motion of the picking shaft, at the end of the working stroke, by resilient means to eliminate rebound.

MOLDED SHUTTLE. P. C. Consoletti (to Draper Corp.). USP 2 771 100, Nov. 20, 1956. (265)

Molded shuttle with side walls of phenolic laminated cotton and nylon and end members of short lengths of waste yarn fibers bonded by phenolic resins.

REED FOR SHUTTLELESS LOOMS FOR WEAVING NARROW FABRICS. G. E. Ulrich (to Tapes, Inc.). USP 2 771 909, Nov. 27, 1956. (266)

SHUTTLE SPRING. W. W. Taft (to Draper Corp.). USP 2 771 910, Nov. 27, 1956. (267)

Bobbin holding spring for shuttles, composed of an inner and outer spring, one holding the bobbin directly and the other serving to reinforce the holding power of the first and to damp its vibrations.

LOOM STOP MOTION. C. W. Holt. USP 2 771 911, Nov. 27, 1956. (268)

Loom stop motion which will stop the loom when the woven cloth is wound more than a predetermined amount around the sand roll.

KNITTING C 3

FABRIC TAKE-UP MECHANISM FOR WARP KNITTING MACHINES. H. C. Noe (to Kidde Mfg. Co.). USP 2 769 324, Nov. 6, 1956. (269)

KNITTING NEEDLE. J. L. Morris. USP 2 770 116, Nov. 13, 1956. (270)

Needle to produce elliptical crossed loops where one end of a knitted loop crosses over or under the other end of the loop, depending on which side of the shank the beard is bent across.

CIRCULAR KNITTING MACHINE YARN RACK. S. Mishcon, L. Mishcon and H. Agulnek (to Supreme Knitting Mach. Co.). USP 2 770 117, Nov. 13, 1956. (271)

Yarn rack for a multiple feed circular knitting machine in which the cones are positioned in more than one plane in upwardly converging stepped formation, forming a canopy and umbrella-like compartment to afford headroom for the machine operator.

STRAIGHT BAR KNITTING MACHINES. E. Start (to William Cotton Ltd). USP 2 770 959, Nov. 20, 1956. (272)

Jack control mechanism for uniform acceleration of jacks from the rest position to contact with the jack sinkers.

KNITTING LIVELY NYLON YARN. A. Burleson and M. N. Holmes (to Patentex, Inc.). USP 2 771 756, Nov. 27, 1956. (273)

Avoiding kinking of lively monofilament nylon yarn by providing means at the takeoff end of the bobbin for setting up a static charge that attracts the relaxed yarn, without exerting any substantial drag on the yarn as it is drawn off the bobbin.

STRETCH HOSIERY. A. Burleson and M. N. Holmes (to Patentex, Inc.). USP 2 771 757, Nov. 27, 1956. (274)

Stretch nylon stocking composed of a leg portion of alternating courses of oppositely twisted nylon yarn,

and a welt portion of recurrent courses of nylon yarn twisted in opposite directions and of yarn without twist.

STRETCHABLE ZONE IN HOSIERY. M. F. Weller (to Patentex, Inc.). USP 2 771 758, Nov. 27, 1956. (275)

A longitudinally stretchable zone at or above the knee in nylon hosiery is obtained by imparting twists in opposite directions in adjoining bands (no more than 4 courses) of relatively inelastic yarn.

STRETCH HOSIERY. W. J. Leath and F. E. Bobo, Jr. (to Patentex, Inc.). USP 2 771 759, Nov. 27, 1956. (276)

Stretch hosiery comprised of alternating courses of oppositely twisted synthetic yarns having permanent liveliness. The twisting and heat setting operations are described.

KNIT STRETCH NYLON HOSIERY FABRIC. A. Burleson (to Patentex, Inc.). USP 2 771 760 and 2 772 191, Nov. 27, 1956. (277)

Knit stretch nylon fabric is obtained by presetting nylon yarns, twisting one yarn in one direction and another yarn in the opposite direction, sizing twisted yarn to hold its torque temporarily while knitting, knitting alternate courses of the oppositely twisted yarns, and desizing to release the torque.

FABRICS C 4

FIBER REINFORCED RESINS FOR VIBRATION DAMPING. R. E. Schwartz (to Malloran Corp.). USP 2 769 741, Nov. 6, 1956. (278)

APPARATUS FOR PILE CARPETS. L. A. Runton and W. G. Bejeuhr (to Alexander Smith Inc.). USP 2 770 283, Nov. 13, 1956. (279)

Apparatus for adhesively securing pile tufts to a backing to make wide pile carpet.

NONWOVEN FABRIC FROM BAST FIBERS. E. Bobkowicz (Canada). USP 2 771 118, Nov. 20, 1956. (280)

Nonwoven fabric of bast fibers laid substantially parallel and bonded together with an adhesive thermoplastic resin.

BITUMINOUS TREATED GLASS FABRICS. D. Kleist, W. K. Sidwell and R. J. Reed (to Owens-Corning Fiberglas Corp.). USP 2 771 387, Nov. 20, 1956. (281)

THERMAL PILE CARPETS. M. D. Lichtenstein. USP 2 771 537, Nov. 20, 1956. (282)

An electric heating element is permanently secured between a sponge rubber base and a pile fabric covering, with the base fused into the interstices of the fabric.

DURABLE OPEN MESH FABRIC. A. L. Ball (to Bay State Abrasive Products Co.). USP 2 771 659, Nov. 27, 1956. (283)

Strong, durable, open mesh fabric in which the warp and filling yarns are fastened together at their points of interlacing by an adhesive.

NONWOVEN FABRICS. S. C. Rogers and K. J. Harwood (to Kimberly-Clark Corp.). USP 2 772 181, Nov. 27, 1956. (284)

Nonwoven fabrics incorporating a soft, flexible, water-insensitive bonding agent.

HAIR FILTER FABRICS. H. M. Gaarder (to Wilson & Co.). USP 2 772 195, Nov. 27, 1956. (285)

Filter made from hair, especially short hairs, adaptable for use as an air cleaner for automobiles.

FINISHING AND CHEMICAL PROCESSING D

CHEMICAL PROCESSES D 1

ROLLERS FOR SQUEEZING MOISTURE FROM TEXTILES. E. Kusters. BP 743 292, Jan. 11, 1956. Through BCIRA 36: 560 (1956). (286)

ROTPROOFING TREATMENT (USE OF SURFACE ACTIVE AGENT). J. Payne (to Monsanto Chem. Ltd). BP 743 408, Jan. 18, 1956. Through BCIRA 36: 561 (1956). (287)

FIBROUS WEBS IMPREGNATED WITH A HEAT-RESISTANT CONDENSATE OF THE PHENOL/ALDEHYDE TYPE. N. V. Philip's Gloeilampenfabrieken (Netherlands). BP 743 623, Jan. 18, 1956. Through BCIRA 36: 560 (1956). (288)

LUBRICATING FIBERS WITH BLENDS OF MINERAL OILS WITH OTHER AGENTS THAT MAKE THEM READILY REMOVABLE IN A MILD SCOUR. R. H. H. Morley (to Textile Oils Ltd). BP 743 641, Jan. 18, 1956. Through BCIRA 36: 550 (1956). (289)

OPEN WIDTH LIQUID TREATMENT APPARATUS. T. Ellison and H. Mulhall (to Brit. Celanese Ltd). BP 743 659, Jan. 18, 1956. Through BCIRA 36: 560 (1956). (290)

CONTROLLING RUNNING FABRIC COATING THICKNESS BY COMPRESSED AIR JETS. Jagenberg Werke AG. BP 743 768, Jan. 25, 1956. Through BCIRA 36: 595 (1956). (291)

ELECTROMAGNETICALLY STEPPED UNISELECTOR FOR CONTROLLING TIMING OF THE OPERATION OF WASHING, DYEING, BLEACHING, ETC., MACHINES. I. M. Fisher. BP 743 786, Jan. 25, 1956. Through BCIRA 36: 594 (1956). (292)

PERMANENT PLEATING. M. Zinamon, E. F. Semlitz and J. Levin. USP 2 769 584, Nov. 6, 1956. (293)

Permanently pleating a fabric containing natural fibers by impregnating the fabric with a crease-resistant chemical and catalyst, mangling, heating to eliminate some, but not all, of its moisture, pleating on a standard pleating machine, and curing the pleated fabric to evaporate the moisture completely.

MERCERIZATION OF COTTON FABRICS TO INCREASE LUSTER. R. J. Cowles and N. A. Ciannamea (to Cluett, Peabody & Co.). USP 2 769 685, Nov. 6, 1956. (294)

Cotton fabric with a permanent luster is produced by wetting with caustic soda to a maximum swelling, rinsing below 105° F for maximum formation of cellulose hydrate II, calendering, further rinsing with hot water, and heating or drying in order to change the hydrate into cellulose hydrate I.

FLAMEPROOFING COMPOSITION. L. J. C. Van de Zande (Belgium). USP 2 769 729, Nov. 6, 1956. (295)

Flameproofing fabrics, paper, etc., with a solution of ammonium sulfate, ammonium phosphate, boric acid, and sodium tetraborate.

WATERPROOFING FABRICS. T. Boyd (to Monsanto Chem. Co.). USP 2 769 732, Nov. 6, 1956. (296)

Water-repellent fabrics, permanent to laundering, are prepared by depositing polymers and copolymers of titanium, or copolymers of titanium with silicon, on the fabrics.

CARROTING PROCESS AND SOLUTION. E. Elöd (Germany). USP 2 770 519, Nov. 13, 1956. (297)

The efficacy of carroting agents is improved by the addition of formamide, which increases the felting tendency of the hair and permits the acid component to be omitted.

CREASEPROOFING CELLULOSE FABRICS. D. M. Gagarine and H. Repokis (to Dan River Mills). USP 2 771 337, Nov. 20, 1956. (298)

Dimensionally stable, crease-resistant cellulose fabrics, which will withstand commercial alkalinity and bleaching conditions without loss of crease-resistance and without chlorine retention, are produced by treatment with an acrolein-formaldehyde condensation product.

STABILIZED FLAMEPROOFED FABRIC. M. M. di Dario (to Chicopee Mfg. Corp.). USP 2 771 379, Nov. 20, 1956. (299)

Dicyandiamide is incorporated in fabrics containing ammonium sulfamate as a flameproofing agent to modify and minimize the undesirable side effects produced by the decomposition of the ammonium sulfamate.

RAINPROOF FABRIC. B. H. Foster (to U. S. Rubber Co.). USP 2 771 661, Nov. 27, 1956. (300)

Breathable rainproof fabric is produced by joining 2 fabrics, having different shrinking power, by stitching to form spaced lines, so that the fabrics have different shrinking powers between lines, rainproof coating the fabric having the lesser shrinking power, and shrinking to cause the coated fabric to loop upon itself between the lines.

ANTISTATIC FINISH. O. P. Cohen and M. J. Scott (to Monsanto Chem. Co.). USP 2 772 189, Nov. 27, 1956. (301)

Treatment of synthetic fibers or fabrics with a quaternary phosphonium salt to provide a soft, antistatic finish.

DYEING AND PRINTING D 2

DYEING OF VISCOSE YARN CAKES. G. T. Douglas and L. Robishaw (Imp. Chem. Ind. Ltd). BP 743 660, Jan. 18, 1956. Through BCIRA 36: 559 (1956). (302)

SCREEN PRINTING DOCTOR ROLLER. J. Zimmer (Austria). BP 743 850, Jan. 25, 1956. Through BCIRA 36: 594 (1956). (303)

STRIPPING AND LIGHTENING WOOL DYEINGS ON WOOL, SILK, CASEIN, POLYAMIDE, OR POLYURETHANE FIBERS. W. Geigy, O. Albrecht and J. Meyer (to Ciba Ltd). USP 2 769 684, Nov. 6, 1956. (304)

GAS FADING INHIBITOR. A. B. Conciatori and V. S. Salvin (to Celanese Corp.). USP 2 770 518, Nov. 13, 1956. (305)

Improving the resistance to gas fading of cellulose acetate and polyethylene terephthalate dyed with a blue anthraquinone dye by applying a polymeric dialkylamino-alkyl-acrylate.

DYEING USING MOLTEN METAL BATH. R. S. E. Hannay and W. Kilby (to Standfast Dyers & Printers Ltd). USP 2 772 136, Nov. 27, 1956. (306)

Application of wool and acetate dyes by passing dyed material, treated with a mild oxidizing agent, through a bath of molten metal.

MECHANICAL PROCESSES D 3

TRANSVERSE GUIDING DEVICE FOR A RUNNING FABRIC. J. Monforts and C. Monforts (Germany). BP 743 903, Jan. 25, 1956. Through BCIRA 36: 594 (1956). (307)

MACHINE FOR FOLDING BEDSHEETS. H. L. L. Jésus (France). USP 2 770 457, Nov. 13, 1956. (308)